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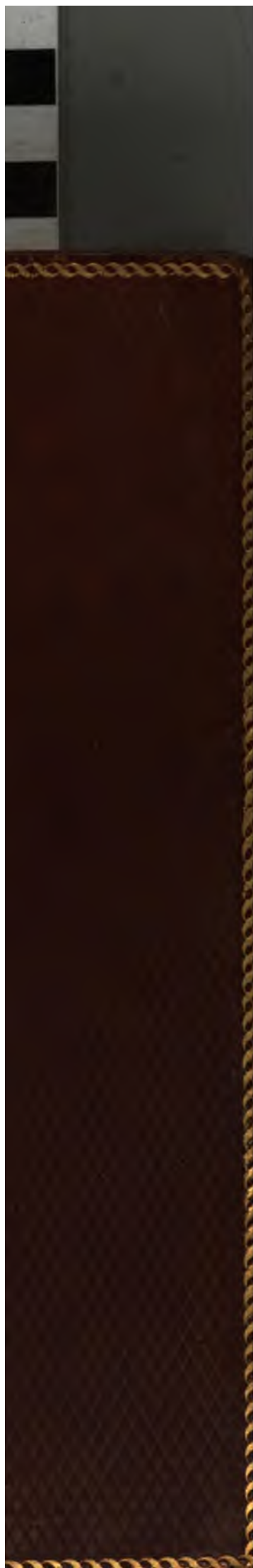
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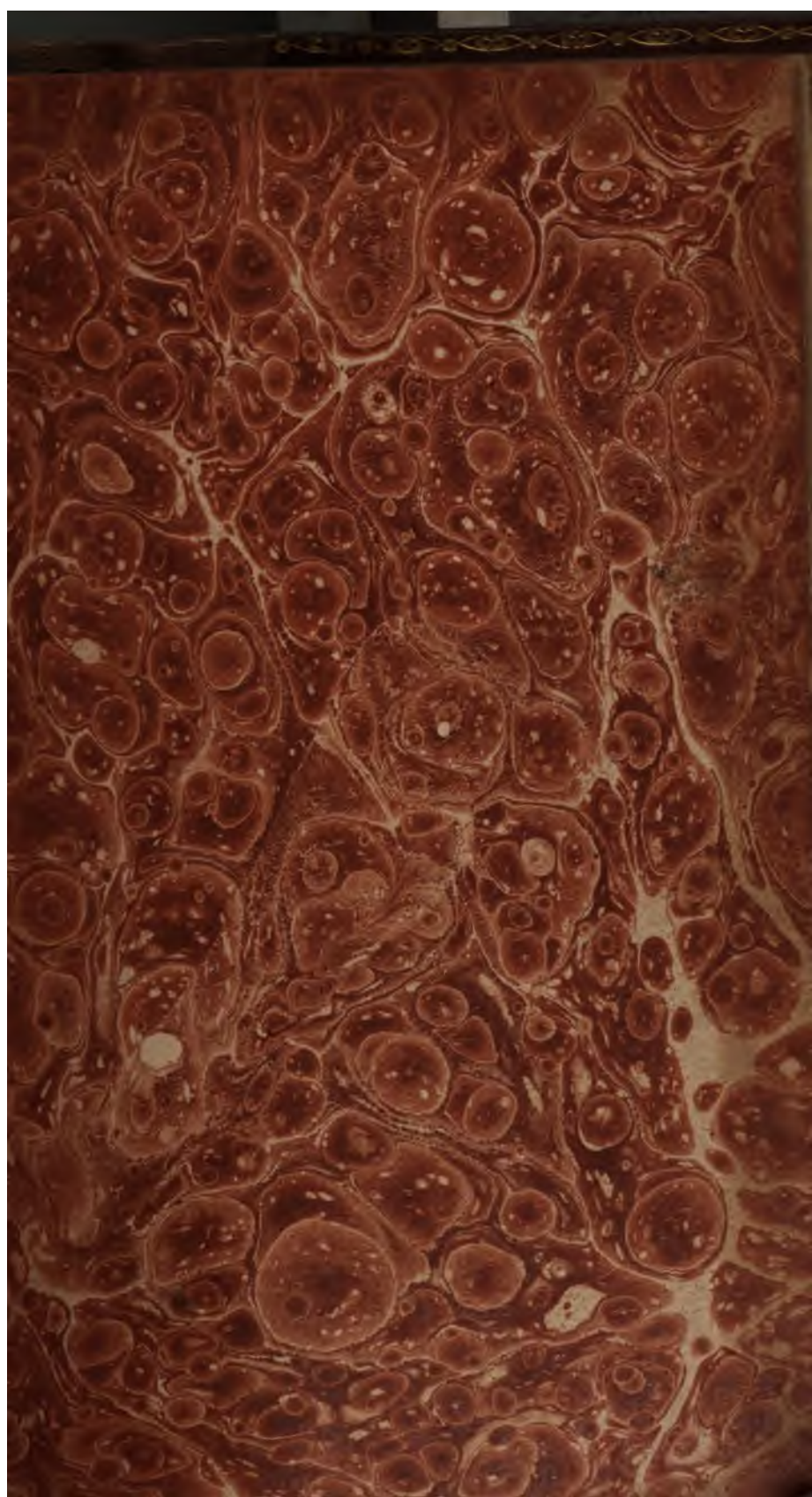


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ENGLISH BOTANY;

OR,

COLOURED FIGURES

OF

BRITISH PLANTS,

WITH THEIR

ESSENTIAL CHARACTERS, SYNONYMS,
AND PLACES OF GROWTH.

TO WHICH WILL BE ADDED,

OCCASIONAL REMARKS.

BY

JAMES EDWARD SMITH, M.D. F.R.S.

MEMBER OF THE IMP. ACAD. NATURÆ CURIOSORUM, THE
ACADEMIES OF STOCKHOLM, UPSAL, TURIN,
LISBON, LUND, BERLIN, PHILADELPHIA, AND
THE NAT. HIST. SOCIETY OF PARIS;
PRESIDENT OF THE LINNÆAN SOCIETY.

THE FIGURES BY

JAMES SOWERBY, F.L.S.

—“VIRESCERE ACQUIRIT EUNDO.”—*Virg.*

VOL. X.

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MDCCC.



ERODIUM cicutarium.
Hemlock Stork's-bill.

MONADELPHIA Pentandria.

GEN. CHAR. *Cal.* 5-leaved. *Petals* 5. *Honey-glands* 5. *Barren filaments* 5. *Fruit* beaked, separating into 5 capsules, each tipped with a long spiral awn, bearded on the inside.

SPEC. CHAR. Flower-stalks many-flowered. Leaves pinnate; leaflets sessile, pinnatifid and cut.

SYN. *Erodium cicutarium*. *L'Herit. in Ait. H. Kew.* v. 2. 414. *Sm. Fl. Brit.* 727. *Relh.* 266. *Sibth.* 211. *Abbot.* 147.

Geranium cicutarium. *Linn. Sp. Pl.* 951. *Huds.* 300. *With.* 609. *Hull.* 154. *Curt. Lond. fasc.* 1. t. 51.

G. cicutæ folio inodorum. *Raii Syn.* 357.

β. G. inodorum album. *Raii Syn.* 357.

γ. G. pimpinellæ folio. *Dill. in Raii Syn.* 358.

Erodium pimpinellæfolium. *Sibth.* 211.

FREQUENT in waste ground, especially on a sandy soil, flowering from June to August or September.

Root annual, tap-shaped, whitish. Stems various in number and luxuriance, procumbent, spreading, mostly branched, leafy, somewhat angular, hairy. Leaves alternate towards the root; often opposite from luxuriance near the extremity of each branch; pinnated; the leaflets mostly alternate, sessile, pinnatifid, acutely cut, hairy. Stipulas in pairs, ovate, acute, membranous. Flower-stalks opposite to the leaves when the latter are alternate, otherwise axillary, elongated, each bearing an umbel of several pretty rose-coloured flowers, white in variety *β*. Stamens simple. Capsules inversely conical, vertical, single-seeded, bristly with reflexed hairs.

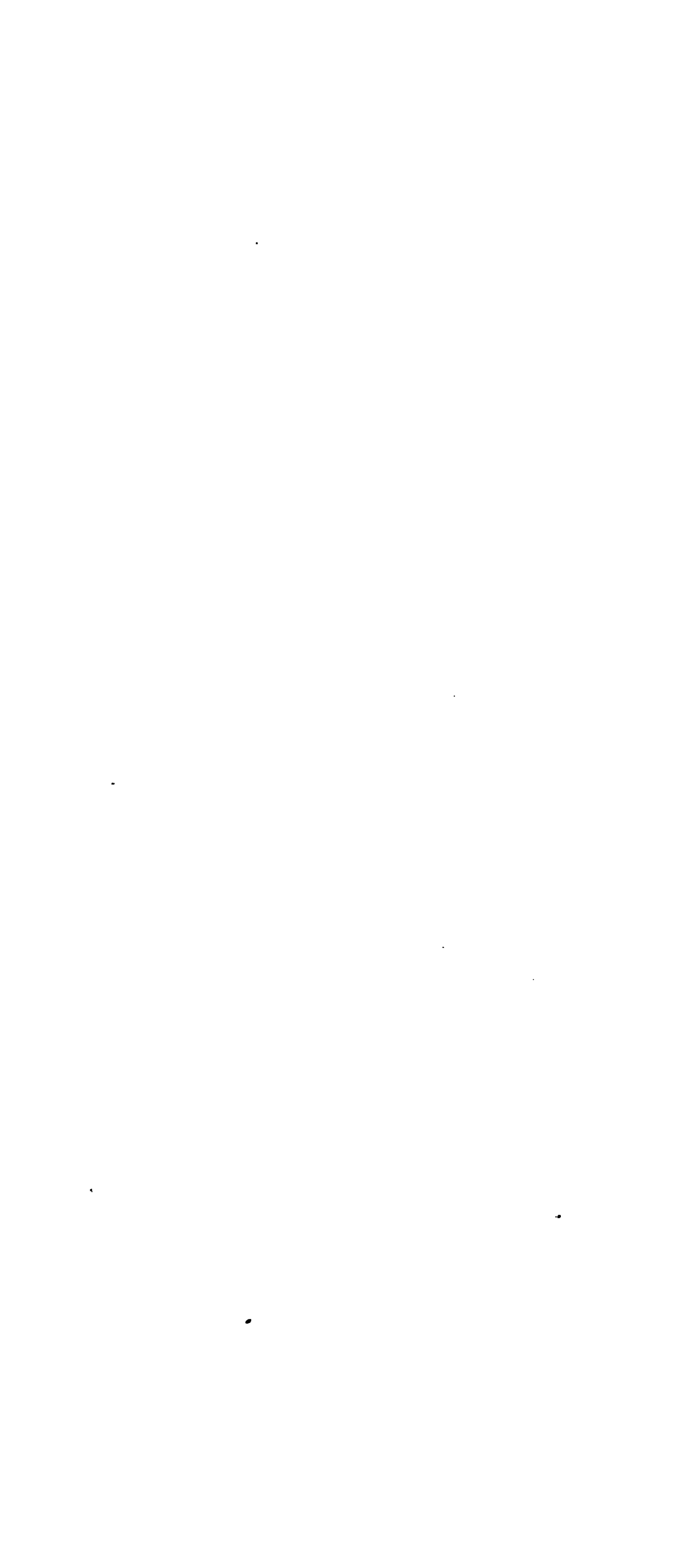
The variety *γ*, reckoned by some a distinct species, has 2 or 3 of its petals elegantly marked with a green depression near the base; but we have found that circumstance very variable, and occurring chiefly by the sea, or else in chalky ground. Some years it abounds in places where only the common kind, with here and there a green spot, will be found the next season.

E. cicutarium can scarcely be called "inodorous," but its leaves have not the musky scent of *E. moschatum*, t. 902.

1768



Adelphi 1768. Published by J. G. Smith, London.



ERODIUM moschatum

Musky Stork's-bill.

MONADELPHIA Pentandria.

GEN. CHAR. *Cal.* 5-leaved. *Petals* 5. *Honey-glands* 5. *Barren filaments* 5. *Fruit* beaked, separating into 5 capsules, each tipped with a long spiral awn, bearded on the inside.

SPEC. CHAR. Flower-stalks many-flowered. Leaves pinnate; leaflets nearly sessile, elliptical, unequally cut.

SYN. *Erodium moschatum*. *L'Herit. in Ait. H. Kew.* v. 2. 414. *Sm. Fl. Brit.* 728.

Geranium moschatum. *Linn. Sp. Pl.* 951. *Huds.* 300. *Witb.* 609. *Hull.* 153. *Raii Syn.* 358.

A RECENT discovery of the Rev. Mr. Abbot's on Ampt-hill warren, Bedfordshire, who favoured us with this truly wild specimen in April, 1801. The plant sometimes occurs in elevated pastures, most frequently in Yorkshire and Westmoreland, flowering throughout the summer.

Root branched, tapering, somewhat fleshy, annual. Stems spreading close to the ground, leafy, round, hairy. Leaves alternate, composed of many pairs of almost sessile, elliptical, broad, hairy leaflets, unequally serrated or cut at their edges, with an odd terminal one, often united to the next pair. Stipulæ membranous. Flower-stalks radical or axillary, curved and spreading, bearing an umbel of several pretty rose-coloured flowers, with a round toothed general involucre. Calyx tipped with red glands. Fertile stamina toothed on each side at their base; the barren ones broad and entire.

The whole herb is hairy and viscid, diffusing a strong musky fragrance, for which it is sometimes kept in gardens, and by which it is known from the common *E. cicutarium*, as well as by its broader and less divided leaflets.



Desmodium illinoense L.

ERODIUM maritimum.

Sea Stork's-bill.

MONADELPHIA Pentandria.

GEN. CHAR. *Cal.* five-leaved. *Petals* five. *Honey-glands* five. *Barren filaments* five. *Fruit* beaked, separating into five capsules, each tipped with a long spiral awn, bearded on the inside.

SPEC. CHAR. Flower-stalks barely three-flowered. Leaves heart-shaped, cut, crenate, rough. Stems close-pressed to the earth.

SYN. *Erodium maritimum.* *L'Herit. in Ait. Hort. Kew. v. 2. 416.*

Geranium maritimum. *Linm. Sp. Pl. 951. Hudsf. 301. Witb. 606. Hull. 153. Dickf. H. Succ. fasc. 11. 11.*

G. pufillum supinum maritimum, *Althææ aut Betonicæ folio nostras.* *Raii Syn. 356.*

A NATIVE of sandy sea-shores in several parts of the kingdom, flowering from May to September. Our specimens were gathered in Cornwall, at St. Michael's Mount, the Lizard Point, and other places.

Root perennial. Stems lying close to the ground, spreading in every direction to a great extent, round, leafy, hairy, rather succulent. Leaves on long foot-stalks, with a pair of purple membranous stipulæ at their base, simple, ovate, or heart-shaped, cut and notched, clothed with depressed hairs. Flowers very small, 2 or 3 on a stalk, but often solitary. Calyx tipped with glandular awns. Petals oblong, narrow, unequal, shorter than the calyx, flesh-coloured. Stamina 5, with flesh-coloured antheræ, and 5 barren filaments ranged alternately with them. Capsules inversely conical, sharp at the base, hairy, crowned with a spiral awn, whose inside is clothed with silky hairs. The herb has a strong smell, like most of the *Geranium* tribe.

We think M. L'Heritier has shewn great judgment in separating this genus from *Geranium* as well as *Pelargonium*, and that the above characters sufficiently distinguish it.



Geranium robertianum

GERANIUM phæum.

Dusky Cranesbill.

MONADELPHIA Decandria.

GEN. CHAR. *Style* one. *Cor.* of five petals, regular. *Neetary* five glands at the base of the longer stamina. *Fruit* beaked, separating into five arilli, each tipped with a long simple naked awn.

SPEC. CHAR. Stalks two-flowered, in a leafy panicle. Stem erect. Calyx slightly pointed. Petals waved. Arillus kneeled, hairy below, rugged above.

SYN. *Geranium phæum.* Linn. *Sp. Pl.* 953. *Huds. Fl. An.* 301. *Relh. Cant. Suppl.* 2. 14.

G. montanum fuscum. *Raii Syn.* 361.

WE received this plant from the Rev. Mr. Abbot of Bedford, who found it at Everholt. Mr. Sims, druggist, of Norwich, showed Dr. Smith specimens gathered in Lancashire, and Mr. Relhan mentions it as a native of Cambridgeshire; but it is perhaps the rarest British *Geranium*. It inhabits dry pastures and thickets, chiefly in mountainous countries, flowering early in summer, and is often cultivated in gardens.

Root perennial, thick and strong. Stem erect, hairy, forked and terminating in a panicle of numerous flowers, on spreading two-flowered stalks, with two pair of small brown chaffy bractæ at their bifurcation. Calyx-leaves elliptical, tipped with a small point, hairy. Petals dark chocolate-coloured, wavy, with a white claw. Stamina all fertile. Seed-cases strongly keeled, clothed in the lower part with thick upright hairs; at the summit naked, and wrinkled transversely. The leaves are many-lobed and crenate, downy, with prominent interbranching veins; the radical ones on longish foot-stalks, the rest solitarily placed opposite to each flower-stalk, and gradually lessening towards the upper part of the stem. Stipulæ much like the bractæ, though somewhat larger.





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GERANIUM nodosum.

Knotty Crane's-bill.

MONADELPHIA Decandria.

GEN. CHAR. *Cal.* 5-leaved. *Pet.* 5, regular. *Nectary* 5 glands. *Fruit* beaked, separating into 5 capsules, each tipped with a long, recurved, naked awn.

SPEC. CHAR. Stalks two-flowered. Leaves opposite, three-lobed, serrated. Capsules even, hairy all over.

SYN. *Geranium nodosum.* *Linn. Sp. Pl.* 953. *Sm. Fl. Brit.* 730. *Hudsf.* 301. *Witb.* 601. *Hull.* 152.

G. quintum nodosum Plateau. *Raii Syn.* 361.

WHETHER this Crane's-bill were really to be found wild in Britain has been doubted by many botanists, for many have certainly sought it in vain. The mountainous parts of Cumberland alone have been mentioned as producing it. Our specimen was gathered the middle of last June, in rather a hilly situation between Hatfield and Welwyn, Hertfordshire, by the Rev. Dr. Abbot. There is little probability of its having escaped from gardens; for the plant, though elegant, is scarcely cultivated except by botanists.

The root is perennial, creeping, somewhat tuberous. Stems a foot and half high, red and shining, swelled below the joints. Leaves opposite, stalked, shining, serrated, divided into three sharp lobes. Flowers large, purple, streaked with red, standing in pairs on long, red, axillary or terminal stalks. Bractæ linear, acute, red. Calyx-leaves elliptical, each tipped with a short red awn. Stamina and claws of the petals fringed. Antheræ ten, all perfect. Stigmas red. Capsules elliptical, scarcely keeled, destitute of all inequalities or wrinkles, and clothed with short soft hairs.



GERANIUM sylvaticum.

Wood Cranebill.

MONADELPHIA Desandria.

GEN. CHAR. *Style* one. *Cor.* of five petals, regular. *Nectary* five glands at the base of the longer stamina. *Fruit* beaked, separating into five arilli, each tipped with a long simple naked awn.

SPEC. CHAR. Stalks two-flowered. Leaves with five or seven sharp lobes, deeply notched and serrated. Stem erect. Petals slightly notched.

SYN. *Geranium sylvaticum.* *Linn. Sp. Pl.* 954. *Huds. Fl. An.* 302. *With. Bot. Arr.* 727.

G. palustre? *Rose's Elem. (App.)* 441. t. 1.

G. batrachoides montanum nostras. *Raii Syn.* 361.

COMMUNICATED from the county of Durham by Mr. E. Robson. However common about woods, thickets and pastures in the north of England, and in Scotland, this *Geranium* is very seldom met with in the southern counties. Mr. Rose, finding the Norfolk specimens not answer exactly to the Linnæan characters, erroneously imagined his plant to be the *palustre*, misled as it should seem by the luxuriance of his specimens, their reddish flower buds, which is a variable circumstance, and possibly by the petals being less deeply notched than Linnæus seems to describe them; but in that respect, too, this and other species occasionally vary. In his figure the petals are too round and entire.

In our specimens, which agree exactly with Mr. Rose's own herbarium in Dr. Smith's possession, and differ in no material respect from that of Linnæus, the root is strong and perennial; stems several, 2 or 3 feet high, roundish, angular when dried, covered with reflexed hairs, much branched, and terminated by numerous flowers. The leaves can scarcely be called *sub-peltate*; they are hairy, with close-pressed hairs, pale beneath, and full of strong zigzag veins. The inner leaves of the calyx have a membranous border; petals blunt, scarcely notched, hairy at the base; stamina all nearly equal; arillus of the seed hairy, with a brown elevated keel, but not rugged. The flowers last through June and July.



Sp. pl. 1794

GERANIUM pratense.
Crowfoot-leaved Cranesbill.

MONADELPHIA Decandria.

GEN. CHAR. *Style* 1. *Petals* 5, regular. *Nectary* 5 glands at the base of the longer stamina. *Fruit* beaked, separating into 5 seed-cases, each tipped with a long simple naked awn.

SPEC. CHAR. *Stalks* two-flowered. *Petals* entire. *Leaves* wrinkled, somewhat peltate, 5-lobed, in many acute segments. *Seed-cases* even, hairy.

SYN. *Geranium pratense*. *Linn. Sp. Pl.* 954. *Huds. Fl. An.* 302. *With. Bot. Arr.* 728. *ed. 3.* 606. *Relh. Cant.* 261. *Sibth. Ox.* 212. *Curt. Lond. fasc. 4. t.* 49.

G. batrachoides. *Raii Syn.* 360.

MEADOWS and pastures, in the hilly parts of England chiefly, are ornamented with the flowers of this fine *Geranium*, from the middle of June till the end of July; it grows also in some places about London, as Battersea, Harrow, &c.

The root is perennial, with long strong fibres. Stems 2 feet or more in height, erect, round, slightly hairy, red and swelled at the base, branched above in a forked manner, with a leaf or two at each subdivision, accompanied by one or two pair of brown lanceolate stipulæ. Leaves in 5, rarely 7, principal very deep divisions, which are also deeply and sharply pinnatifid and cut, wrinkled and downy on both sides; paler beneath. The radical ones on long foot-stalks. Flower-stalks long, two-flowered, with 4 bractæ, like the stipulæ, at their division. Petals large, obovate, veiny, hairy at the base. Stamina all perfect. Seed-cases even, hairy, slightly keeled. Seeds finely dotted.

All solid marks of distinction between this and *G. sylvaticum* (t. 121) fail us, except that the leaves of the latter are much less deeply cut. The termination of the petals is variable in both, but those of *G. sylvaticum* are most inclined to be notched. In appearance the two plants differ considerably.

G. pratense is found occasionally with white or striped petals; but its most curious variety is that with double flowers, discovered by Lady Charlotte Murray in 1793 near Athol House, Scotland, and sent to Lady Banks, with whom it preserves its original appearance. We do not recollect another instance of the kind in this genus.



Geranium appollonis L. f. v. 16.

GERANIUM robertianum.

Stinking Crane's-bill.

MONADELPHIA Decandria.

GEN. CHAR. *Cal.* 5-leaved. *Pet.* 5, regular. *Nectary* 5 glands. *Fruit* beaked, separating into 5 capsules, each tipped with a long recurved naked awn.

SPEC. CHAR. Stalks two-flowered. Leaves somewhat pedate, pinnatifid, five-angled. Calyx with ten angles. Capsules rugged.

SYN. *Geranium robertianum.* *Linn. Sp. Pl.* 955. *Sm. Fl. Brit.* 732. *Huds.* 305. *With.* 608. *Hull.* 153. *Relh.* 267. *Sibth.* 215. *Abbot.* 149. *Curt. Lond. fasc. 1. t.* 52. *Raii Syn.* 358. *Ger. em.* 939.

β. *G. lucidum saxatile*, foliis *Geranii robertiani.* *Raii Syn.* 358.

VERY common in waste ground, on walls, banks, and even in groves and shady places. In the latter its bright red flowers are seen, throughout the summer and autumn, peeping through the umbrageous foliage of other plants. In exposed spots the plant is more conspicuous for the bright shining red assumed by its stems and lower leaves (as in *G. lucidum*, *t.* 75); but in such places its duration is much shorter, and its size much smaller, than in the shade.

The root is fibrous and annual. Stems spreading, brittle, round, red. Leaves on long stalks, ternate, cut in a pedate manner, their outline five-angled, their surface shining, more or less hairy. Flowers on long cloven axillary and terminal stalks. Calyx hairy, with 10 angles. Petals undivided, purple, with a palmate white mark at the base. Stamina smooth, all fertile. Capsules oblong, rugged, simply keeled. Seeds quite smooth.

The whole herb has a strong and peculiar scent. In maritime situations the leaves are more fleshy and shining, and the petals often white.

2486



Aug. 2. 1806. Published by J. G. Sowerby, London.

GERANIUM lucidum.

Shining Cranebill.

MONADELPHIA Decandria.

GEN. CHAR. *Style* one. *Cor.* of five petals, regular. *Nectary* five glands at the base of the longer stamina. *Fruit* beaked, separating into five arilli, each tipped with a long simple naked awn.

SPEC. CHAR. Stalks two-flowered. Calyx pyramidal, angular and rugged. Leaves roundish and five-lobed.

SYN. *Geranium lucidum.* Linn. *Sp. Pl.* 955. *Huds. Fl. An.* 304. *With. Bot. Ar.* 730. *Relb. Cant.* 262.

G. saxatile. *Raii Syn.* 361.

THIS beautiful species grows in the same situations as the *G. robertianum*, on walls, moist rocks, &c. but is not so common, except in the mountainous parts of Great Britain. It is a brilliant ornament to the romantic dells of Matlock and Westmoreland, decorating many a thatched roof and mossy stone with its polished red stems, and shining leaves, which often likewise turn red if exposed to much light. It flowers throughout the summer. The root is annual. We are obliged to Mr. Robson of Darlington for this specimen.

In the species before us the arillus of the seed has several rugged longitudinal ribs, and is hairy at the top. This part is very important in determining the species of *Geranium*, and has not yet been well attended to, or botanists would never have been at a loss to discriminate *G. molle*, *pyrenaicum*, *pusillum* and *rotundifolium*.



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GERANIUM molle.

Dove's-foot, Crane's-bill.

MONADELPHIA Decandria.

GEN. CHAR. *Cal.* 5-leaved. *Pet.* 5, regular. *Nectary* 5 glands. *Fruit* beaked, separating into 5 capsules, each tipped with a long recurved naked awn.

SPEC. CHAR. Stalks two-flowered, alternate, opposite to the leaves. Leaves rounded, lobed, downy. Capsules puckered, smooth.

SYN. *Geranium molle.* *Linn. Sp. Pl.* 955? *Sm. Fl. Brit.* 734. *Huds.* 303. *With.* 604. *Hull.* 153. *Relb.* 261. *Sibth.* 213. *Abbot.* 150. *Curt. Lond. fasc.* 2. t. 50.

G. columbinum. *Raii Syn.* 359.

THIS is perhaps our most common *Geranium*, being found in cultivated as well as waste ground, in fields and by way sides, in all parts of Great Britain, though the *pufillum*, t. 385, is equally plentiful in many places, particularly where the soil is gravelly.

G. molle is annual, flowering from April to the end of summer. Stems mostly spreading or procumbent, reddish, clothed with soft but longish hairs. Herb covered with fine soft down, and sharing the peculiar odour of the *Geranium* tribe. Leaves roundish, lobed, and cut into broadish, not linear, segments. Flower-stalks solitary, opposite to the leaves, spreading very much. Flowers erect, much larger and redder than those of *pufillum*, with cloven petals. Stamina all perfect. Capsules transversely rugose or puckered, by which curious mark the species is with absolute certainty distinguished from *pufillum*, *pyrenaicum*, and *rotundifolium*, with all which it has often been confounded. The seeds are quite smooth, not dotted.

Linnæus certainly did not distinguish this from the *pyrenaicum* when he published his *Species Plantarum*, and we therefore quote that work in the present instance with doubt.



[191]

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GERANIUM *pusillum*.
Small-flowered Cranebill.

MONADELPHIA Decandria.

GEN. CHAR. Style one. Petals 5, regular. Nectary 5 glands at the base of the longer stamina. Fruit beaked, separating into 5 seed-cases, each tipped with a long simple naked awn.

SPEC. CHAR. Stalks two-flowered. Petals notched. Leaves kidney-shaped, palmate, cut. Seed-cases even, carinated, downy with erect hairs. Seeds smooth.

SYN. *Geranium pusillum*. *Lim. Sp. Pl.* 957. *Huds. Fl. An. ed.* 1. 266. *With. Bot. Arr.* 733. *Relb. Cant.* 262. *Cavan. Diff.* 202. t. 83. f. 1. *Dicks. Dr. Pl.* 78.

G. molle β. *Huds. Fl. An. ed.* 2. 303.

G. parviflorum. *Curt. Lond. fasc.* 6. t.

G. malvæfolium. *With. Bot. Arr. ed.* 3. 603. *Scop. Carn. v.* 2. 37.

G. humile. *Cavan. Diff.* 202. t. 83. f. 2.

G. columbinum humile, flore cæruleo minimo.
Raii Syn. 359. t. 16. f. 2.

COMMON in various parts of England on waste ground, especially on a gravelly soil, though till very lately not well distinguished from *G. molle* and *rotundifolium*. It differs from the former in having an even and downy, not wrinkled and naked seed-coat, and from the latter in the downiness of that part being close-pressed, or at least pointing upwards, not spreading, and the seeds smooth, not dotted, as we long ago observed. See t. 157. The petals moreover scarcely exceed the calyx, and are notched, yet not so deeply cloven as those of *molle* and *pyrenaicum*, with which last, though widely different in size and appearance, *pusillum* has more affinity in structure than with any others of this intricate tribe.

The root is annual. Stems prostrate, unless supported by other plants, branched, varying extremely in luxuriance. Hence the small variety figured by Dillenius in Ray's Synopsis has been thought a distinct species, or the true state of the plant while the larger was referred to *molle*. Leaves in sharp generally linear segments. Flowers small, pale purple. Calyx without awns. Five of the stamina only perfect. It flowers from June to September, and in sensible qualities agrees with *molle*.

We lament that we cannot follow our candid and judicious friend Dr. Withering in the trivial name. The leaves are less like those of Mallows than most others. *Pusillum*, from the minute flowers, is very expressive, nor is there any reason to change it to *parviflorum*.





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GERANIUM pyrenaicum.

Mountain Cranesbill.

MONADELPHIA Decandria.

GEN. CHAR. *Style* 1. *Petals* 5, regular. *Nectary* 5 glands at the base of the longer stamina. *Fruit* beaked, separating into 5 seed-cases, each tipped with a long simple naked awn.

SPEC. CHAR. *Stalks* two-flowered. *Petals* cloven, twice as long as the calyx. *Leaves* kidney-shaped, palmate, cut. *Seed-cases* even, sharply carinated, slightly downy. *Seeds* smooth.

SYN. *Geranium pyrenaicum*. *Linn. Mant.* 97, & 257. *Huds. Fl. An.* 302. *With Bot. Arr.* 729. *ed.* 3. 601. *Sibth. Ox.* 212. *Curt. Lond. fasc.* 3. *t.* 42. *Lightf. Scot.* 367.

THE English name of this species seems to have been given from too great a regard to its Latin one, which however is very faulty, the plant being by no means peculiar to the Pyrenean mountains or any others, but found in waste ground and the borders of fields in various parts of Europe, common about London, as at Chelsea, Hammersmith, &c. flowering in July. Linnæus described it from Gerard, supposing he had never seen it, and little suspecting that he had it in his herbarium confounded with *molle*. From that species it differs essentially in the seed-cases being even, not transversely wrinkled, though their keel has a projecting tooth or two on each side. It most agrees with *pusillum* (see our *t.* 385) in its seed-cases, which when young are downy, as in that, but much less so when they come to maturity. We have not found them at all hairy as mentioned in Dr. Withering's 3d edition. The petals twice as long as the calyx, and deeply cloven, distinguish it however from *pusillum*, not to mention the greater size of all its parts, and the perennial root, in which respects it differs from both the above-mentioned and from other neighbouring kinds. The 5 exterior stamina are sometimes abortive. It varies with white flowers. The stems are erect, rising to the height of 2 or 3 feet, with spreading branches.

Mr. Curtis, in his excellent *Flora*, *fasc.* 2, *t.* 50, has noticed the wrinkled seed-coat of *G. molle*; but it is remarkable he should not mention that mark of distinction when he came to describe the *pyrenaicum*, and was so much puzzled to find a permanent character between them. In fact his "large-flowered *molle* about Chelsea-hospital" is the *pyrenaicum*.



Geranium robertianum L.

GERANIUM rotundifolium.

*Doves-foot Cranebill.**MONADELPHIA Decandria.*

GEN. CHAR. *Style* one. *Cor.* of 5 petals, regular. *Nectary* 5 glands at the base of the longer stamina. *Fruit* beaked, separating into 5 arilli, each tipped with a long simple naked awn.

SPEC. CHAR. Stalks two-flowered. Petals entire, the length of the calyx. Stem spreading. Leaves kidney-shaped, cut. Arillus even, hairy. Seeds reticulated.

SYN. *Geranium rotundifolium.* *Linn. Sp. Pl.* 957.
Huds. Fl. An. 303. *With. Bot. Arr.* 732.

G. columbinum majus, flore minore cæruleo.
Raii Syn. 358.

FROM under a wall near Hackney, gathered by Mr. E. Forster jun. who has also found it about Islington, and at Church Bramton in Northamptonshire. This is one of the least general of our Cranebills, though abundant in quantity where it does grow.

This species is annual, and flowers in June and July. The stems are much branched, straggling, but scarcely prostrate. Every part of the herb is clothed with a velvet-like downiness, very soft to the touch. The leaves are more round than in some other common species; their colour paler. It is, however, needless to recur to the vague marks of distinction given by all authors, as the punctated or reticulated seeds distinguish this from all its allied species, especially from the pusillum, with which its arillus somewhat agrees; though even in that part they may be distinguished, the hairs on the arillus of pusillum being *close pressed*, not spreading. The arillus of molle differs from both in being very rugged, and not even, in its surface. That of pyrenaicum is even, sharply carinated, and scarcely pubescent at all.



GERANIUM dissectum.

Jagged-leaved Crane's-bill.

MONADELPHIA Decandria.

GEN. CHAR. *Cal.* 5-leaved. *Pet.* 5, regular. *Nectary* 5 glands. *Fruit* beaked, separating into 5 capsules, each tipped with a long recurved naked awn.

SPEC. CHAR. Stalks two-flowered. Petals cloven. Leaves in five deep lacinated divisions. Capsules hairy. Seeds dotted.

SYN. *Geranium dissectum.* *Linn. Sp. Pl.* 956. *Sm. Fl. Brit.* 737. *Huds.* 304. *Witb.* 603. *Hull.* 152. *Relb.* 263. *Sibth.* 214. *Abbot.* 150. *Curt. Lond. fasc.* 6. *t.* 45.

G. columbinum majus, dissectis foliis. *Raii Syn.* 359.

A NATIVE of waste ground, hedges and fallow fields, especially on a gravelly soil, flowering in May or June, and continuing for a considerable time.

Root annual. Stems branched, weak and straggling, clothed



GERANIUM columbinum.

Long-stalked Cranesbill.

MONADELPHIA Decandria.

GEN. CHAR. *Style* one. *Cor.* of 5 petals, regular. *Nectary* 5 glands at the base of the longer stamina. *Fruit* beaked, separating into 5 cafes, each tipped with a long simple naked awn.

SPEC. CHAR. *Stalks* two-flowered, longer than the leaves; which are five-cleft and divided into many acute segments. *Seed-cafes* smooth. *Calyx* awned.

SYN. *Geranium columbinum.* *Linn. Sp. Pl.* 956. *Hudf. Fl. An.* 304. *With. Bot. Arr.* 731. *Sibth. Oxon.* 214.

G. columbinum dissectis foliis, pediculis florum longissimis. *Raii Syn.* 359.

GATHERED wild near Bird-brook, Essex, by Thomas Walford, Esq. This is generally supposed to be a rare species, but we have observed it in various parts of Norfolk and Yorkshire, as well as about Bristol, always in a gravelly or calcareous soil, and never in any great quantity at once. It is an annual, flowering in June and July.

The whole herb is slender, mostly procumbent, clothed with small rigid close-pressed hairs, those on the stem and stalks pointing downwards, the rest upwards. Segments of the leaves linear. The long flower-stalks distinguish this species, and the calyx is five-angled, and tipped with very evident awns. Flowers of a delicate pale purple. Antheræ blue. Cafes of the seeds smooth, slightly keeled. Seed covered with minute punctures, as in *G. rotundifolium*.

In this genus the direction of the pubescence will be found useful in discriminating some species, as well as the seeds and their covers.





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GERANIUM sanguineum.

Bloody Cranebill.

MONADELPHIA Decandria.

GEN. CHAR. *Style* one. *Cor.* of 5 petals, regular. *Nectary* 5 glands at the base of the longer stamina. *Fruit* beaked, separating into 5 cafes, each tipped with a long simple naked awn.

SPEC. CHAR. *Stalks* single-flowered. *Leaves* roundish, in 5 or 7 deeply separated lobes, each of which is 3-cleft.

SYN. *Geranium sanguineum.* *Linn. Sp. Pl.* 958. *Huds. Fl. An.* 305. *With. Bot. Arr.* 734. *Relb. Cant.* 263.

G. hæmatodes. *Raii Syn.* 360.

FREQUENT in thickets and rocky pastures in the mountainous counties, but rare elsewhere; yet it bears the smoke of London better than most vegetables, if planted in a dry gravelly or calcareous soil. It is perennial, flowering most part of the summer, and making a very ornamental appearance.

Roots somewhat woody, producing many lax spreading branched leafy stems, often elegantly pendent from the brow of a rugged precipice, or scattered among shrubs over the broken stony soil in which this and most species of European Cranebills delight. These stems are round, jointed, a little swelling above and below the joints. Leaves opposite, deeply lobed and cut, roughish, their margins entire. Flower-stalks axillary, much longer than the leaves, bearing a solitary flower, furnished with a joint and two bractæ, more than half way between their base and their apex. We have a variety from Switzerland, sent by Mr. Davall, which has 2 flowers and 4 bractæ from each of these joints.—The calyx is tipped with awns. Petals heart-shaped, crimson, veiny, turning blue in decay. Seed-cafes nearly globose, bristly at their summit; beak downy. The stem, flower-stalks, calyx and back of the leaves are clothed with white slender spreading hairs; the upper side and margin of the leaves with short depressed bristles.



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ALTHEA

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ALTHÆA officinalis.

Marsh Mallow.

MONADELPHIA Polyandria.

GEN. CHAR. *Cal.* double ; the external one in about 9 segments. *Arilli* numerous, each containing one seed.

SPEC. CHAR. Leaves simple, downy, slightly 5-lobed.

SYN. *Althæa officinalis.* *Linn. Sp. Pl.* 966. *Huds. Fl. An.* 306. *Wub. Bot. Arr.* 735. *Relb. Cant.* 264. *A. vulgaris.* *Raii Syn.* 252.

S**A****L****T** marshes, and banks of ditches in the fens, afford Marsh Mallows in great abundance. We are obliged to Mr. Jacob Rayer for this wild specimen, from Woldham marsh, Kent. It flowers from July to September.

The roots are perennial, long and woody, abounding (as well as the herb) with a pure tasteless colourless mucilage, for which reason its decoction is much used in disorders of the kidneys or bladder, and in all cases where emollients are wanted. The stems are numerous, upright, two or three feet high, round, naked below and purplish ; in the upper part covered with numerous alternate leaves, various in breadth, more or less evidently 5-lobed and 5-ribbed, unequally serrated in the margin. From their bosoms arise short dense panicles of not inelegant pale purplish flowers. The outer calyx has often 10 or even 12 divisions, though generally but 9. Nothing can exceed the delicately soft pubescence which clothes every part of this herb, and which consists of minute starry hairs entangled with each other.



Plumier del. 1792.





M A L V A sylvestris. .

Common Mallow.

MONADELPHIA Polyandria.

GEN. CHAR. *Cal.* double; the outermost of three leaves. *Seed-cases* numerous, circularly arranged. *Seeds* solitary.

SPEC. CHAR. Stem upright, herbaceous. Leaves with seven sharpish lobes. Leaf-stalks and flower-stalks hairy.

SYN. *Malva sylvestris.* *Linn. Sp. Pl.* 969. *Huds.* 307. *With.* 613. *Hull.* 155. *Relb.* 265. *Sibth.* 215. *Abbot.* 151. *Curt. Lond. fasc.* 2. t. 51. *Woodv. Med. Bot.* t. 54.

M. vulgaris. *Raii Syn.* 251.

THE common Mallow, so plentiful by road sides and in all waste places, needs little botanical illustration. Its upright bushy stem, and large purple flowers, which are produced in the greatest profusion, sufficiently distinguish it from the almost equally common *M. rotundifolia*. It is perennial, and may be found in blossom from May to September.

The root is spindle-shaped, branched, whitish. Stem very much branched and spreading, round, hairy. Leaves alternate, on foot-stalks, heart-shaped, plaited, roughish, divided into 7 crenate lobes; the upper ones are most deeply and sharply lobed. Flower-stalks clustered, hairy, single-flowered. Calyx hairy. Petals inversely heart-shaped, three or four times as long as the calyx, of a full rose-colour veined with deeper purple, smooth and shining, as is also the column of the stamina. Pollen whitish, large, as in all this tribe.

The whole herb, especially the root, abounds with a pure mucilage, and possesses the emollient qualities of the Marsh Mallow, *Althæa*, though perhaps in an inferior degree. It has however the advantage of being much more common, and within every-body's reach.







MALVA rotundifolia.
Dwarf Mallow.

MONADELPHIA Polyandria.

GEN. CHAR. *Cal.* double ; the outermost of 3 leaves.
Capsules numerous, circularly arranged. *Seeds*
solitary.

SPEC. CHAR. Stems prostrate. Leaves roundish-
heart-shaped, five-lobed. Fruit-stalks bent down-
ward.

SYN. *Malva rotundifolia.* *Linn. Sp. Pl.* 969. *Sm.*
Fl. Brit. 741. *Huds.* 307. *With.* 612. *Hull.* 155.
Relb. 271. *Sibth.* 215. *Abbot.* 151. *Curt. Lond.*
fasc. 3. t. 43.

M. sylvestris minor. *Raii Syn.* 251.

COMMON in waste ground, by the sides of roads and
foot-paths, flowering copiously from June to September.

The root is annual, whitish, spindle-shaped, branched, abound-
ing with mucilage like that of *M. sylvestris*. Stems feve-
ral, prostrate and divaricated, not much branched, clothed
with numerous, roundish, downy, crenate leaves, plaited and
cut into five or seven lobes, heart-shaped at the base, and
standing on long hairy foot-stalks. Flowers on shorter stalks,
which grow several together from the bosom of each leaf, and
which are clothed, as well as the calyx, with soft hairs.
Corolla twice the length of the calyx, each segment notched,
the whole of a pale purple or lilac hue. Capsules wrinkled.

We now presume our *M. pusilla*, v. 4. t. 241, to be only
a variety of this species.



Malva sylvestris L.

MALVA *pufilla*.
Small-flowered Mallow.

MONADELPHIA *Polyandria*.

GEN. CHAR. *Cal.* double; the outermost of three leaves.
Seed-cases numerous; *seeds* solitary.

SPEC. CHAR. Stem declining. Leaves roundish-heart-shaped, slightly five-lobed. Flowers pedunculated, generally in pairs. Petals the length of the calyx.

SYN. *Malva parviflora*. *Huds. Fl. An.* 307.

M. minor, flore parvo cæruleo. *Raii Syn.* 251.

WE have this for the *Malva parviflora* of Mr. Hudson, on the authority of a specimen communicated by that gentleman to Mr. Relhan, and said to have been gathered by himself in a wild state near Hythe in Kent. Some seeds remaining upon it being sown, vegetated, and the specimen here delineated is a regular descendant of the original plant. Specimens most precisely agreeing with it are in the Linnæan herbarium from the Upsal garden, and are incautiously marked by Linnæus *M. parviflora*, though evidently distinct from the genuine original ones so named, described in *Amæn. Acad.* v. 3. 416, and well represented by Jacquin's figure, *Hort. Vind.* t. 39. In that true *M. parviflora* the leaves are very angular, and sharply serrated; the flowers sessile (or nearly so), 3 or 4 together in axillary clusters.

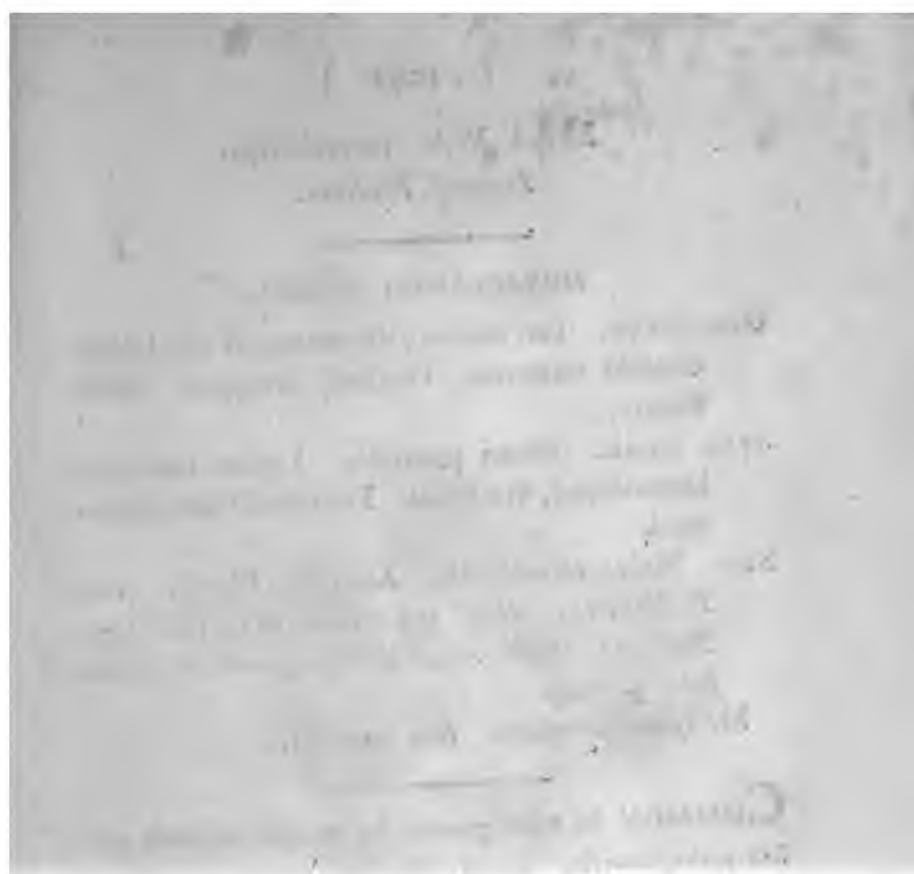
There is more difficulty in distinguishing Mr. Hudson's plant (which we have named *pufilla*) from *M. rotundifolia*, to which it is most nearly allied, and future experience must show whether they be permanently distinct or not. In leaves and stem they are much alike; but *M. pufilla* appears to have never more than two flowers from each *axilla*, instead of 4, 5, or a still greater number; and the petals scarcely exceed the calyx, instead of being more than twice as long. In the coverings of the seeds, so important in the neighbouring genus of *Geranium*, we find no difference. In both species when dry they are reticulated with transverse wrinkles.

In the *Flora Anglica* this plant is marked as biennial. We have not quoted the *Bot. Arr.* because every thing that is there said upon the subject is either taken from Mr. Hudson's account, or from the real *M. parviflora* of Linnæus.



Root of the plant is poisonous





MALVA moschata.

Musk Mallow.

MONADELPHIA Polyandria.

GEN. CHAR. *Cal.* double; the outermost of 3 leaves.
Capsules numerous, circularly arranged. *Seeds*
solitary.

SPEC. CHAR. Radical leaves kidney-shaped, cut; those
on the stem in five deep pinnatifid and finely
divided segments. *Calyx* hairy.

SYN. *Malva moschata.* *Linn. Sp. Pl.* 971. *Sm. Fl.*
Brit. 742. *Huds.* 308. *Willd.* 613. *Hull.* 155.
Relb. 266. *Sibth.* 216. *Abbot.* 151. *Curt. Lond.*
fasc. 4. t. 50.

Alcea tenuifolia crispa. *Dill. in Raii Syn.* 253.

A. vulgaris. *Raii Syn.* 252, the synonyms all wrong.

THE grassy borders of fields and little-frequented roads in
gravelly countries are enlivened with the blossoms of the beau-
tiful Musk Mallow during the hot months of Summer and
Autumn, and at the same time its herbage will be found to
diffuse a strong musky odour, which is hardly to be perceived
in cold or damp weather.

The root is perennial, woody and tough. Stems about two
feet high, but little branched, round, rough with rigid hairs.
Radical leaves on long footstalks, kidney-shaped, 5-lobed, cre-
nate, soon withering away; stem-leaves on shorter stalks, and
divided to the base into 5 segments, which are deeply pinnatifid
and cut. Flowers on long axillary simple stalks, large, rose-
coloured. Ends of the petals abruptly jagged. *Calyx* hairy,
or almost bristly, paler than the leaves.

Ray mistook this for the *Alcea vulgaris* of J. Bauhin, (*Malva*
Alcea Linn.), and inserted it by that name in his Synopsis.
Dillenius in his edition mentions it by its right synonym,
A. tenuifolia crispa of the same author, and copies Bauhin's
doubts respecting its being really distinct from the other. Thus
Hudson introduced both into his Flora, but erroneously; for
the plants of Ray and Dillenius are both one, and the true
M. Alcea, as distinct a species as can be, has never been found in
England.

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[1841]

LAVATERA arborea.

Sea Tree-Mallow.

MONADELPHIA Polyandria.

GEN. CHAR. *Cal.* double; the outermost 3-cleft. *Capsules* numerous, circularly arranged. *Seeds* solitary.

SPEC. CHAR. Stem arborescent. Leaves downy, plaited, with seven angles. Flower-stalks axillary, clustered, single-flowered.

SYN. *Lavatera arborea.* *Linn. Sp. Pl.* 972. *Sm. Fl. Brit.* 742. *Huds.* 306. *With.* 614. *Hull.* 154. *Lightf.* 374.

Malva arborea marina nostras. *Raii Syn.* 252.

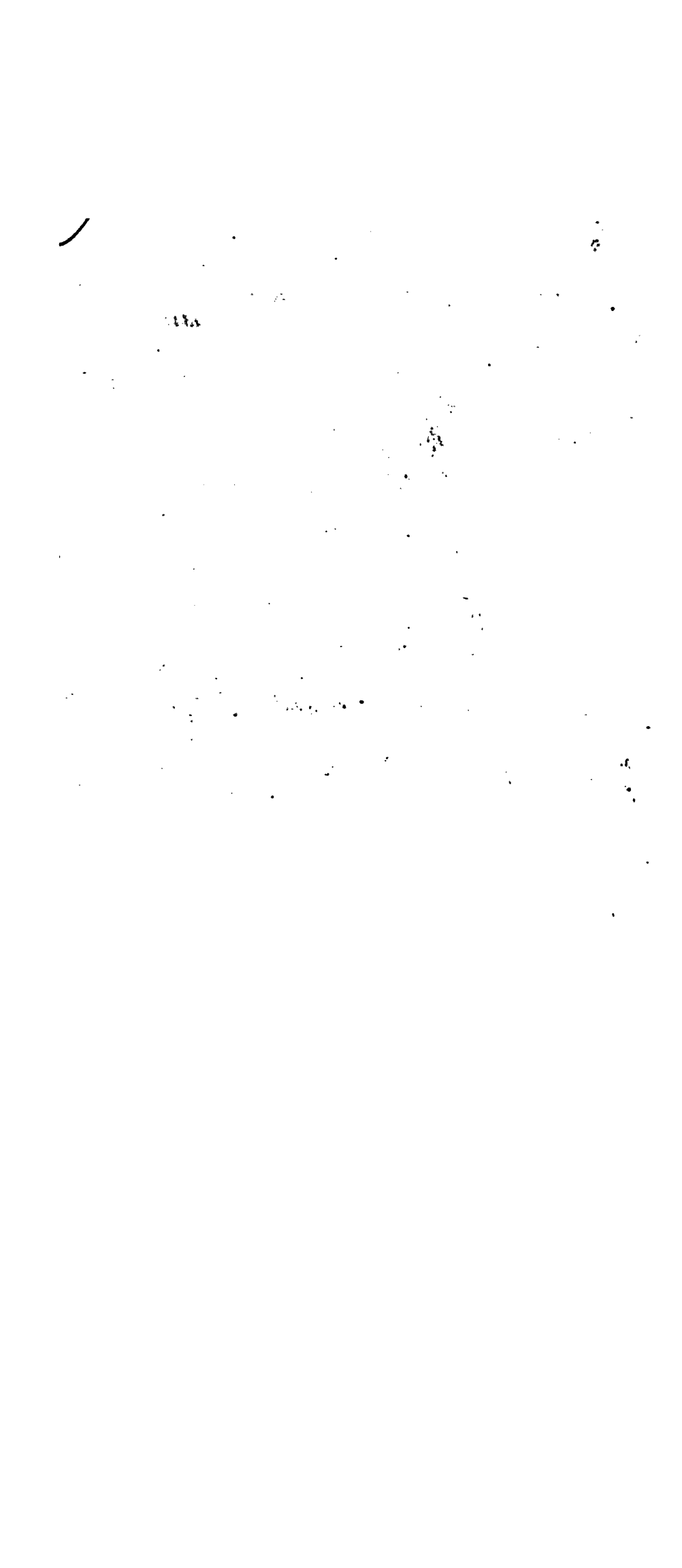
THE Tree Mallow grows wild on several parts of the south-west coast of Britain, as well as on the east coast of Scotland, on rocky cliffs, flowering in July, and often producing a long succession of bloom. In a garden, whence our specimen was taken, the plant often remains some years without blossoming, but dies in the winter after it has flowered, being naturally biennial. Seeds scattered in the ground will some of them keep springing up every season, for an indeterminate number of years; but the young plants are impatient of cold, except in maritime situations, and few of them survive even a single winter.

The root is deep and much branched. Stem 6 to 10 feet high, upright, straight, round, thick, simple, except in the upper part, where it forms a branching leafy head. It is clothed with clusters of small deflexed bristles. Leaves alternate, on long stalks, pliable and downy, of seven shallow crenate lobes. Flowers on simple axillary clustered stalks, very much like those of *Malva sylvestris*, t. 671. Outer calyx deeply divided into 3 large lobes, but not, as in *Malva*, formed of 3 separate leaves, a slight and rather artificial distinction.

1841



Painted and Published by J. A. Smith, London.



FUMARIA solida.

Solid Bulbous Fumitory.

DIADELPHIA HEXANDRIA.

GEN. CHAR. *Cal.* 2-leaved. *Cor.* ringent. *Filaments* 2, membranaceous, each bearing 3 *antheræ*.

SPEC. CHAR. Stem mostly simple, erect. Leaves twice ternate. Bractææ palmate, longer than the flower-stalk.

SYN. *Fumaria solida.* *Linn. Mss. in Sp. Pl. Sm. Fl. Brit.* 748. *Curt. Mag.* t. 231.

F. bulbosa β et γ . *Linn. Sp. Pl.* 983.

F. intermedia. *With.* 620. t. 29. *Hull.* 157.

Radix cava minor. *Ger. em.* 1091.

IN addition to the various parts of Westmoreland and Warwickshire, mentioned by Withering as truly wild stations of this plant, we can now name Wickham in Hampshire, as another place where it is found, on the authority of the Rev. T. Garnier, who favoured us with this specimen. In country gardens it is common, flowering in April.

Root perennial, bulbous, formed of several thick coats but not hollow. Stem solitary, a span high, erect, a little zigzag, leafy, smooth, almost always simple, bearing a lanceolate sheath at the bottom. Leaves 2 or 3, alternate, on stalks, smooth, twice ternate, cut. Spike solitary, terminal, simple, of several purple flowers pale and prominent at their base, which are compared, by old writers, to little birds. Bractææ wedge-shaped, palmate, rather longer than the flower-stalks. Spur cylindrical, bluntish. Pod short, bursting at its base.

The root and bractææ, as well as the scale at the base of the stem, sufficiently distinguish this species from the Hollow-rooted Fumitory, which has not been observed wild in Britain.—We find no specific distinction between the β and γ of Linnæus.



July 24-1871. Sent to Prof. Sewall, London.



FUMARIA lutea.

*Yellow Fumitory.**DIADELPHIA Hexandria.*

GEN. CHAR. *Cal.* 2-leaved. *Cor.* ringent. *Filaments* 2, membranaceous, each bearing 3 *antheræ*.

SPEC. CHAR. Pods nearly cylindrical, shorter than their foot-stalk. Stems spreading, angular. Bractææ minute. Spur short, rounded.

SYN. *Fumaria lutea.* *Linn. Mant.* 2. 258. *Baub. Pin.* 143. *Mill. Ic.* t. 136. f. 1. *Gmel. Syst.* 1080 *Ait. H. Kew.* v. 3. 2.

F. capnoides. *Witb.* 620.

F. corydalis. *Mattb. Valgr.* v. 2. 503.

FROM old walls near Fountain's Hall, within about 500 yards of the celebrated Abbey of that name in Yorkshire, communicated by Mr. W. Brunton jun., flowering in May, 1798. Dr. Withering, if we are right in our quotation, of which there can scarcely be a doubt, says it was first found wild near Castleton, Derbyshire, by a Mr. Howard. It is not rare about old gardens, and although both the above places of growth appear to establish it as a native, perhaps it may originally have escaped from the garden, like *Valeriana rubra*, and some others now well established.

Root fibrous and tufted, strongly fixed between the stones, perennial. Herb delicate, tender, smooth, a little glaucous. Stems spreading, branched, reddish, leafy, triangular. Leaves thrice-ternate, three-cleft. Flowers spiked, terminal, yellow. Bractææ very small, ferrated, acute. Spur of the corolla rounded, incurved, much shorter than the stalk, as is likewise the cylindrical pod.

F. capnoides, with which in his *Sp. Pl.* Linnæus originally confounded this, is an annual plant, with large lobed bractææ, paler flowers, spur straight and taper, as long as the flower-stalk, pods twice as long, and triangular, crowned with the permanent style. The leaflets are also much narrower.







FUMARIA officinalis.

*Common Fumitory.**DIADELPHIA Hexandria.*

Gen. CHAR. *Cal.* 2-leaved. *Cor.* ringent. *Filaments* 2, membranaceous, each bearing 3 *antheræ*.

Spec. CHAR. Spike lax. Pods single-seeded, globose, emarginate. Stem spreading. Leaflets with dilated segments.

Syn. *Fumaria officinalis.* *Lim. Sp. Pl.* 984. *Huds.* 309, α . *With.* 620. *Relb.* 267, α . *Sibth.* 217. *Abbot.* 152. *Curt. Lond. fasc.* 2. t. 52. *Mart. Fl. Ruft.* t. 68. *Woodv. Med. Bot.* t. 88.

F. vulgaris. *Raii Syn.* 204.

VERY common in all kinds of cultivated ground, and about hedges or banks, flowering all summer long.

Root annual. Stem much branched, spreading and almost prostrate, angular, leafy. Whole herb smooth and glaucous. Leaves doubly pinnate, their principal divisions generally alternate, their leaflets wedge-shaped, lobed, dilated. Spikes or clusters opposite to the leaves, simple, many-flowered, lax. Bractææ small. Flowers rose-coloured, with a green keel to the upper and under petals, and all of them very deep red at the summit. Spur short, very blunt. Seed-vessel nearly globular; but with a notch at the tip, so as to be (as Mr. Curtis well observes) somewhat inversely heart-shaped. It contains a single large round seed.

This plant is called in some old books *Fumus terra* (smoke of the earth), a name perhaps more intelligible to the sapient writers than to us. The herb has been used as a purifier of the blood, and is said, even by Dr. Cullen, to be peculiarly serviceable in several disorders of the skin.

F. capreolata of Linnæus is surely a distinct species. We hope to give a representation of it at some future period.—*F. spicata* is still more distinct, though Linnæus once doubted it, having a dense spike and a flat elliptical pod.



Grevillea robusta (L.f.) R.Br.



FUMARIA parviflora.

Small-flowered Fumitory.

DIADELPHIA Hexandria.

GEN. CHAR. *Cal.* 2-leaved. *Cor.* ringent. *Filaments* 2, membranaceous, each bearing 3 *antheræ*.

SPEC. CHAR. Spike lax. Pods single-seeded, globose, pointed. Stem spreading. Leaflets with linear channelled segments.

SYN. *Fumaria parviflora.* *Lamarck Encycl. v. 2. 567.*

F. tenuifolia. *Sym. Syn. 200.*

*F. foliis tenuissimis, floribus albis, circa Monspe-
lium nascens.* *Vaill. Par. 56. t. 10. f. 5.*

DISCOVERED by the late Mr. Jacob Rayer in the corn-fields about Woldham near Rochester, in September 1792, and communicated by Mr. T. F. Forster. I have long hesitated to admit it as a species, but the difference in the leaves and flowers led me to a careful examination of the fruit, so important in characterising the species of *Fumaria* in general, and I have now scarcely a doubt remaining.

Root, stem, and glaucous colour much like the common Fumitory, and the leaves are similarly constructed, but their ultimate subdivisions are very much narrower, linear, channelled, and not at all dilated or wedge-shaped. Flowers not more than half as large, paler, though similar in every part of their structure. Seed-vessel globular; but instead of being emarginate as in the last, it is pointed, and on this circumstance the specific difference may perhaps be most safely rested.

This plant is common in cultivated ground about Paris, from whence it was communicated to me by the late Mr. Stephen De Lessert, a very ardent and ingenious young botanist, son to the lady to whom Rousseau addressed his letters on Botany.





FUMARIA capreolata.

Ramping Fumitory.

DIADELPHIA Hexandria.

GEN. CHAR. *Cal.* 2-leaved. *Cor.* ringent. *Filaments* 2, membranaceous, each bearing 3 *antheræ*.

SPEC. CHAR. Spike lax. Pods single-seeded, globose. Stem climbing by means of the twisted foot-stalks. Leaflets wedge-shaped, lobed.

SYN. *Fumaria capreolata*. *Linn. Sp. Pl.* 985. *Sm. Fl. Brit.* 751. *Witb.* 621. *t.* 30. *Hull.* 158. *Sibth.* 217. *Curt. Lond. fasc.* 6. *t.* 47. *Dicks. H. Sicc. fasc.* 9. 9.

F. officinalis β . *Huds.* 309. *Relb.* 267.

F. major scandens, flore pallidiore. *Raii Syn.* 204.

MR. CURTIS has, in our opinion, sufficiently proved this to be a distinct species, and not a variety of the Common Fumitory. The much greater size of the whole herb; its less glaucous hue; the twisting foot-stalks, which, like tendrils, support it upon other plants, and enable it to rise to 3 or 4 feet in height; the paler, less gaping flower, with a more projecting spur; the larger and more elegant calyx-leaves, all serve to distinguish it; nor does the seed-vessel, so important in the specific distinctions of *Fumariæ*, entirely fail us in this instance, for the pods are here more globose than in the *officinalis*, and by no means obcordate, though marked with a slight depression on each side of the insertion of the style.

F. capreolata is annual, flowering from June to September. It occurs here and there in fields and garden grounds, as about Battersea; but Mr. Sowerby and Mr. Curtis have remarked it to be more abundant, and seemingly at home, in Cornwall and Devonshire. Mr. W. Borrer has communicated it to us from Suffex.

The delineator of Dr. Withering's plate has erroneously represented tendrils distinct from the footstalks,



Umbelliferae



[187]

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FUMARIA claviculata.

*Climbing Fumitory.**DIADELPHIA Hexandria.*

GEN. CHAR. *Cal.* two-leaved. *Cor.* gaping. *Filaments* two, membranous, with three antheræ on each.

SPEC. CHAR. Pods linear. Leaf-stalks ending in a tendril.

SYN. *Fumaria claviculata.* *Linn. Sp. Pl.* 985. *Huds. Fl. An.* 309. *With. Bot. Arr.* 753.

F. alba latifolia. *Raii Syn.* 335.

THIS delicate plant is by no means frequent in England, though almost peculiar to our island. It loves a sandy or gravelly soil in moist, shady, somewhat mountainous situations. This specimen was gathered from a hedge separating a wood and a meadow behind the Eagle Inn at Snarebrook, near Woodford, Essex, where I have known it these five years. *James Sowerby.*

The root is annual. Herb weak and succulent in all its parts, and so tender in habit that no good specimens can be obtained except they are instantly after gathering spread in a book, and so left till they are dry. The stem is flattened on one side. Leaves glaucous, paler beneath, pinnate, then pedate, the leaflets oval, sharp-pointed and entire; their common footstalk ending in an alternately compound tendril, which takes fast hold of the neighbouring plants; another obstacle to getting good specimens. The pale greenish white flowers appear in June, followed by more till the end of July. The pods, which are very different in different species of *Fumaria*, in this are linear, or rather oblong, pointed and smooth, containing generally three seeds.







1901
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POLYGALA vulgaris.

*Milkwort.**DIADELPHIA Oflandria.*

GEN. CHAR. *Cal.* of five leaves, two of them wing-shaped, and coloured. *Pod* inversely heart-shaped, two-celled.

SPEC. CHAR. Flowers in a cluster, crested. Stems herbaceous, simple, procumbent. Leaves linear-lanceolate.

SYN. *Polygala vulgaris.* *Linn. Sp. Pl.* 986. *Huds. Fl. An.* 310. *Wilh. Bot. Arr.* 754. *Relb. Cant.* 268.

Polygala. *Raii Syn.* * 287.

MILKWORT grows every where in dry heathy pastures and on rocks, flowering in June and July. Its perennial woody root throws out many spreading procumbent stems, clothed with deep-green smooth leaves, which vary much in size and figure. The flowers, commonly blue, are often white, flesh-coloured or purple, but in all cases marked with green lines. The permanent calyx turns at length wholly green, and wraps up the young pod, closing and drooping to protect it from rain. So the elegant fringed crest of the corolla shelters the stamina and pistillum, admitting air, but scarcely wet or insects.

An infusion of the herb, which is very bitter, taken in a morning fasting, about a quarter of a pint daily, promotes expectoration, and is good for a catarrhus cough. I tried it at Montpellier by the advice of Professor Gouan with success, and have since known it useful. *J. E. Smith.*





[1888]

STATUTES
OF THE

LEGISLATURE

OF THE
STATE OF
NEW YORK
IN SENATE,
JANUARY 1888.
ALBANY:
J. B. LIPPINCOTT & CO.,
PRINTERS.
1888.

THE
STATUTES
OF THE
LEGISLATURE
OF THE
STATE OF
NEW YORK
IN SENATE,
JANUARY 1888.

[1339]

SPARTIUM scoparium.

Common Broom.

DIADELPHIA Decandria.

GEN. CHAR. *Stigma* longitudinal, downy above. *Filaments* all united, adhering to the germen. *Calyx* extended downward.

SPEC. CHAR. Leaves ternate or solitary. Branches angular, without thorns.

SYN. *Spartium scoparium*. Linn. *Sp. Pl.* 996. Sm. *Fl. Brit.* 753. Huds. 310. With. 623. Hull. 158. Relh. 275. Sibth. 218. Abbot. 153. Curt. Lond. fasc. 5. t. 52. Woodv. *Med. Bot.* t. 89.

Genista angulosa trifolia. Raii *Syn.* 474.

THIS handsome shrub grows abundantly on dry gravelly hills, to the ornament of which it greatly contributes, both by its copious evergreen twigs in winter, and still more by its golden blossoms in the months of May and June. In fertile loamy soil it reaches the height of 10 or 12 feet, but is generally of more humble growth. That which grows in Scotland seems to be a permanently large variety.

The strong and tough stem bears numerous, long, straight, angular, smooth, evergreen branches. The leaves are deciduous, on footstalks, ternate, often simple on the upper part of the same branch; the leaflets uniform, entire, smooth. Flowers generally solitary, axillary, on smooth round stalks, drooping, large, of a full bright yellow, often orange-coloured externally. Calyx somewhat campanulate, with 2 gaping toothed lips, smooth, frequently purple. The stamina are all united, or truly monadelphous, at the base. Germen downy, with a long downy contorted style. Pod compressed, brown, a little hairy, containing several polished flattish seeds.

We have received from South Wales an elegant variety with pale lemon-coloured flowers, but it is not invariably constant from seed.

The virtues of the Broom in dropsies are very problematical, nor is it to be used rashly.

2339



Aug. F. L. 1804. Published by T. G. Smith, London.



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GENISTA tinctoria.

*Dyer's Greenweed.**DIADELPHIA Decandria.*

GEN. CHAR. *Calyx* two-lipped, with two teeth in the upper lip, and three in the lower. *Standard* oblong, bent backwards from the rest of the flower.

SPEC. CHAR. Leaves lanceolate, smooth. Branches round, striated and erect.

SYN. *Genista tinctoria*. Linn. *Sp. Pl.* 998. Hudf. *Fl. An.* 311. Willd. *Bot. Arr.* 758. Relb. *Cant.* 269. Rati *Syn.* 474.

IN pastures and on dry barren banks in the borders of fields very frequent. When in flower in the months of July and August, it entirely clothes the places where it abounds with a rich glowing yellow. The root creeps very far, and throws up a great number of stems, very much branched, one or two feet high. The branches are so strongly striated that they might almost be called angular, or rather furrowed. Ray observes in his Synopsis, that this plant is but too frequent in pastures, as it gives a bitter taste to the milk of cows which feed upon it. He adds, that the whole plant dyes a yellow colour, which by means of woad is afterwards made green; and Dr. Withering says the dyers prefer it to all other yellows for wool that is to be dyed green.

The seeds, in this species at least, are generally numerous, scarcely ever solitary, as described in the *Genera Plantarum*.

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Mimulus aurantiacus



[94]

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GENISTA pilosa.

Hairy Green-Weed.

DIADELPHIA Decandria.

GEN. CHAR. *Cal.* 2-lipped, with 2 teeth above, 3 below. *Standard* oblong, bent backwards from the rest of the flower.

SPEC. CHAR. Leaflets lanceolate, obtuse. Stem tuberculated, prostrate.

SYN. *Genista pilosa.* *Linn. Sp. Pl.* 999. *Huds. Fl. An.* 311. *Willd. Bot. Arr.* 759.

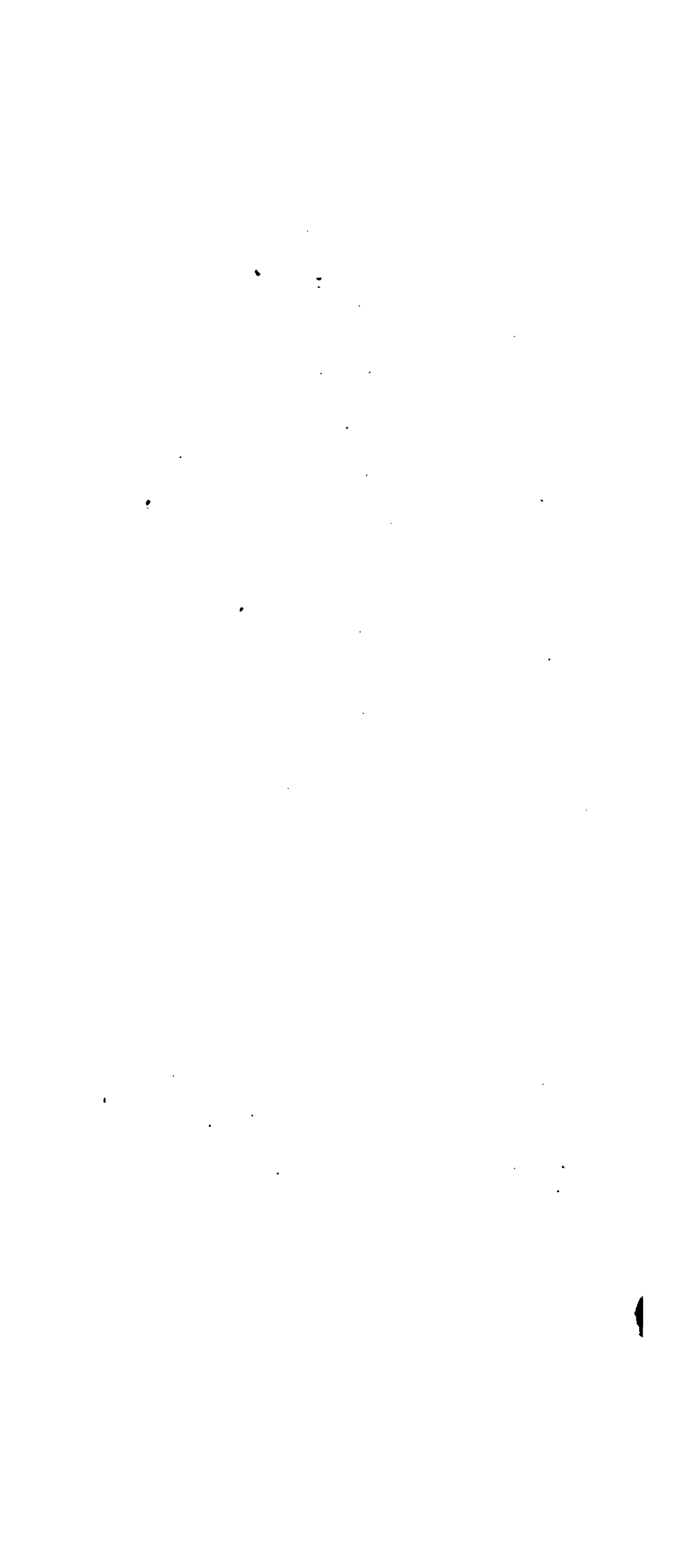
HIGH sandy heaths about Bury produce in abundance this very rare plant, and we received it from thence by favour of William Mathew, Esq. flowering in May. After the flowers are past, it is (as Mr. Woodward observed) very difficult to be found; and either from this cause, or its being extremely local, escaped the notice of Ray and the accurate observers of his day.

Root woody and perennial. Stems like those of a dwarf willow, prostrate, branched, tuberculated wherever former leaves have grown, angular and leafy towards their extremities, and their very youngest branches are silky, like the backs of the leaves, which are ternate, small and obtuse. Flowers numerous, solitary or in pairs, of a full yellow, with silky footstalks and calyx. The teeth of the latter are all very short, and the 2 upper ones broadest. Seeds about 3 or 4 in the unripe ger-men. The back of the standard is often as silky as the calyx, and even the keel is hairy.



Flower by det. Oct. 1, 1794





GENISTA anglica.

*Needle Furze.**DIADELPHIA Decandria:*

GEN. CHAR. *Calyx* two-lipped, with two teeth in the upper lip, and three in the lower. *Standard* oblong, bent backwards from the rest of the flower.

SPEC. CHAR. Spines simple, not found on the flower-bearing branches. Leaves ovato-lanceolate.

SYN. *Genista anglica*. *Linn. Sp. Pl.* 999. *Huds. Fl. An.* 311. *With. Bot. Arr.* 759. *Relb. Cant.* 269.

G. minor Aspalathoides, five *Genista spinosa anglica*. *Raii Syn.* 475.

COMMON on moist boggy heaths, flowering in May and June. It has the long, woody, branched, and creeping roots of most of its tribe; from which arise several bushy, alternately branched stems a foot high, set with scattered sharp spines, which the first year are leafy, as are also the flowering branches that spring out among them. Leaves oval, pointed, entire, a little revolute in the margin, somewhat glaucous, smooth. Flowers from a few of the uppermost axillæ, solitary, on short footstalks, of an elegant bright yellow; the keel is remarkably long; the wings and standard turn green in drying. Pods oval, turgid, smooth, containing 10 or 12 seeds.

This species is supposed to be almost peculiar to Britain, though found also in Denmark (*Fl. Dan.* 619). We beg leave to think Fuchsius's figure 240, quoted by Dr. Stokes, was rather intended for *G. germanica*, as its compound spines and its habit evince.





[104]

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ULEX europæus.
Common Furze, or Whin.

DIADELPHIA Decandria.

GEN. CHAR. *Cal.* of 2 leaves, almost as long as the *pod.* *Stamina* all connected.

SPEC. CHAR. Teeth of the calyx obsolete, converging. *Bractææ* ovate, lax. Branches erect.

SYN. *Ulex europæus.* *Linn. Sp. Pl.* 1045. *Sm. Fl. Brit.* 756. *Huds.* 312. *Forst. in Sym. Syn.* 160. *With.* 626, var. 1. *Hull.* 159. *Relb.* 269. *Sibth.* 220. *Abbot.* 154. *Fl. Dan.* 1. 608.

Genista spinosa vulgaris. *Raii Syn.* 475.

BARREN sandy heaths and commons produce this plant in profusion; nor can any thing be conceived more brilliant than Putney heath, for example, in the month of May, when its honey-scented blossoms spread in one sheet of "vegetable gold" over the whole country. Linnæus is reported on his arrival in England to have fallen on his knees in a rapture of admiration at this spectacle. He always lamented that he could hardly preserve the Furze alive through a Swedish winter, even in a green-house. Indeed our own frosts frequently cut it down to the root.

Stem shrubby, composed of innumerable, dense, green, spinous, striated branches. Leaves awl-shaped, solitary, pungent, roughish, deciduous. Flowers axillary, on short downy stalks, large, bright-yellow. Calyx of two, pale-green, downy, somewhat rusty, concave leaves, with a pair of ovate, spreading, downy *bractææ* at their base. The uppermost calyx-leaf terminates in 2, the lowermost in 3, minute blunt teeth, so closely adhering together as to be not at first discernible. The *stamina* are all united at their base, so as to be in fact monadelphous. *Pod* oblong, downy, containing about 4 seeds.

The *Ulex* is much used for firing by the poor. It ought not to be cut on the same spot more than once in 3 or 4 years, when it attains its full size.



177. Ceanothus L.



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[743]

U L E X nanus.

Dwarf Furze.

DIADELPHIA Decandria.

GEN. CHAR. *Cal.* of 2 leaves, almost as long as the *pod.* *Stamina* all connected.

SPEC. CHAR. Teeth of the calyx lanceolate, spreading. *Bractææ* minute, close-pressed. Branches reclining.

SYN. *Ulex nanus.* *Forst. in Sym. Syn.* 160. *Sm. Fl. Brit.* 757.

U. europæus β. *Lin. Sp. Pl.* 1045. *Huds.* 312.

Relb. 270. *With.* 626, var. 2. *Hull.* 159, var. 2.

Genista spinosa minor. *Raii Syn.* 475.

THIS, which most botanists have considered as a variety of the Common Furze, is by no means so general a plant, though it grows copiously upon dry elevated heaths in many parts of the kingdom. It is at first sight distinguished by its much more humble, and partly prostrate, growth; its smaller and paler flowers, which are chiefly produced from August to October; and a certain elongated and cylindrical form of the branches laden with flowers interspersed with horizontal, or partly deflexed, spines. These however are not all its distinguishing marks. The flowers afford certain specific characters. The *bractææ* are very minute, brown, close-pressed to the calyx, often hardly visible. The calyx is more silky and yellow; its teeth deeply cut, spreading, and very evident: a circumstance which will always prevent its being confounded with the other species.

These plants, though so common with us, are by no means of general occurrence throughout Europe. Portugal, and the western parts of France, produce them more plentifully than any other country except our own.

743





1900

January 1st 1900

Dear Sir,

I have the honor to acknowledge the receipt of your letter of the 29th inst.

and in reply to inform you that the same has been forwarded to the proper authorities.

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Yours truly,
J. H. [Signature]

I am, Sir, very respectfully,
Yours truly,
J. H. [Signature]

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Yours truly,
J. H. [Signature]

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I am, Sir, very respectfully,
Yours truly,
J. H. [Signature]

O N O N I S arvensis.

Rest-harrow.

DIADELPHIA Decandria.

GEN. CHAR. *Cal.* 5-cleft, its divisions linear. *Standard* striated. *Pod* turgid, rhomboid, sessile. *Filaments* in one undivided set.

SPEC. CHAR. Stem hairy. Branches at length spinous. Flowers mostly solitary. Leaves generally simple, entire towards their base.

SYN. *Ononis arvensis.* *Lighf.* 386. *Relb.* 270.

α. *O. arvensis.* *With.* 627. *Hull.* 160. *Sibth.* 220. *Abbot.* 155.

O. inermis α. *Huds.* 313.

Anonis non spinosa, purpurea. *Raii Syn.* 332.

β. *Ononis spinosa.* *Syst. Veg. ed.* 14. 651. *Huds.* 312. *With.* 627. *Hull.* 160. *Sibth.* 220. *Abbot.* 155. *Mart. Fl. Russ.* t. 129.

Anonis spinosa, flore purpureo. *Raii Syn.* 332.

THE common Rest-harrow grows in the borders of barren sandy fields and by way-sides, flowering from June to August. Its root is perennial, very strong and woody, which has given rise to its English name. Stems annual, upright or procumbent, round, woody, branched, leafy, hairy, their branches in a barren soil and on an old root terminating in a spine. Leaves alternate, on foot-stalks, elliptical inclining to a wedge-shape, furrowed, roughish, toothed only towards their extremity; the lower ones are often ternate. A pair of united stipulæ embraces the stem. Flowers for the most part solitary, axillary, on stalks, of an elegant rose-colour. Calyx hairy, its teeth permanent, dilating as the fruit ripens. Standard twice as long as the wings and keel. Pod small and rhomboid, scarcely longer than the calyx. Seeds tuberculated. The foliage and calyx are more or less viscid, with a peculiar strong smell.

We are persuaded the *Ononis spinosa* is only the *arvensis* or *inermis* in an older or more starved state, and also that the *O. repens* is merely a procumbent maritime variety. *O. antiquorum* of Linnaeus really appears not to differ from that here delineated. *O. hircina* of Jacquin seems a good species.





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ANTHYLLIS vulneraria.

Kidney Vetch, or Ladies Finger.

DIADELPHIA Decandria.

GEN. CHAR. *Cal.* inflated. *Pod* roundish, clothed with the calyx. *Stamina* all connected at their base.

SPEC. CHAR. Herbaceous. Leaves pinnated, unequal. Heads of flowers in pairs.

SYN. Anthyllis vulneraria. *Linn. Sp. Pl.* 1012. *Huds.*

Fl. An. 313. *With. Bot. Arr.* 765. *Relb. Cant.* 271.

Vulneraria rustica. *Raii Syn.* 325.

WE have in a late number presumed to animadvert on the fallacy of common report as to the vulnerary powers of vegetables, and here present a plant which has scarcely report to countenance its pretensions, nor any thing else than a name, for which we meet with no authority but the account of John Bauhin, who, from the nature of his vast work, was obliged to trust much to others. The plant however is highly worthy of consideration as a food for cattle, thriving like the Saint-foin in dry chalky places, and being favourable to the production of milk, as indeed its natural affinities would appear to indicate.

It occurs in most of our chalk and lime-stone countries abundantly, flowering from June to August. The root is perennial and woody. Stems round, hairy, nearly a foot high, not quite erect, leafy, terminated by two heads of thick-set yellow flowers, with fingered bractæ, and a membranous hairy calyx. One of these heads is lower than the other, and flowers earlier. The leaves are pinnated, approaching to a lyrate form; their leaflets very unequal in size, entire, of a fine green and nearly smooth above, hairy beneath and on their margin.

The flowers are sometimes found scarlet, which Linnæus attributes to a red clay soil; he also mentions their becoming white in a white clay, but the latter variety we have not observed.





[1910]

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[1046]

PISUM maritimum.

Sea Pea.

DIADELPHIA Decandria.

GEN. CHAR. *Style* triangular, keeled and downy at the upper edge. Two upper segments of the *calyx* shortest.

SPEC. CHAR. Footstalks flattish on the upper side. Stem angular. *Stipulæ* arrow-shaped. Stalks many-flowered.

SYN. *Pisum maritimum*. *Linn. Sp. Pl.* 1027. *Sm. Fl. Brit.* 760. *Spicil.* 8. t. 9. *Huds.* 313. *With.* 629. *Hull.* 160.

P. marinum. *Raii Syn.* 319.

OBSERVED by Mr. Sowerby growing in scattered patches on the shore at Walmer, Kent. It flowers in July and August, and has been noticed by botanists on various parts of the east and south coast of England. The famous account given by the learned Dr. Caius, of the peas which grew so copiously in the autumn of 1555, on rocks between Aldburgh and Orford, as to afford food for thousands of people, relates to this plant. A year of scarcity drew the attention of the inhabitants to this beneficent provision of Nature; and, as distress seldom fails to remind man of his Maker, they deemed it miraculous, and feasted on what they have in other seasons overlooked or neglected, because, like the best gifts of Providence, it was within every one's reach.

The long perennial roots of the *P. maritimum* run deep between the stones, and the simple, square, procumbent, leafy stems spread over the surface of the ground. The whole herb is smooth, of a greyish or glaucous hue. Leaves alternate, formed of several, alternate, elliptical, gradually diminishing, entire leaflets, their common stalk ending in a branched tendril. *Stipulæ* in pairs, arrow-shaped, toothed near the base. Flowers in large handsome bunches, on long axillary stalks, beautifully variegated with blue and crimson. Pods oblong, smooth, each containing 6 or 8 seeds, which when young are about as good as the common grey pea. The style being sharp-edged above, not flat, alone separates this genus from *Lathyrus*.

1046



July 1. 1802. Published by Jas. Sowerby, London.



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OROBUS tuberosus.

Tuberous Orobus.

DIADELPHIA Decandria.

GEN. CHAR. *Style* linear, cylindrical, downy above.
Cal. blunt at the base, its upper segments deeper
and shorter.

SPEC. CHAR. Leaves pinnated, elliptic-lanceolate.
Stipulæ half arrowshaped, toothed at the base.
Stem simple, erect.

SYN. *Orobus tuberosus.* *Linn. Sp. Pl.* 1028. *Sm. Fl.*
Brit. 761. *Huds.* 314. *With.* 631. *Hull.* 160.
Sibth. 221. *Abbot.* 155. *Curt. Lond. fasc.* 1.
t. 53. *Dicks. H. Sicc. fasc.* 1. 11.

O. sylvaticus, foliis oblongis glabris. *Raii Syn.* 324.

THIS is one of our most elegant papilionaceous plants. It grows chiefly in woods, thickets, and hilly pastures, on a clay or loamy soil. On gravel it is not to be found, and is therefore rare in Norfolk. It flowers in May and June. The various rose tints of the petals, contrasted with the dark purple of the calyx and ripening pods, render it very ornamental.

The roots are perennial, creeping and tuberous. Stems simple, erect, a foot high, leafy, winged, smooth. Leaves alternate, formed of 2, 2½, or 3 pairs of lanceolate, more or less elliptical, entire leaflets, the common stalk projecting beyond them. Their colour is a darkish green. The stipulæ vary in breadth, but are always toothed at the base. Flowers in loose long-stalked axillary clusters. Calyx smooth. Pod cylindrical, pendulous, black when ripe, tipped with the permanent channelled style. Seeds several. The Highlanders are reported to chew the roots like liquorice or tobacco, and sometimes to brew a sort of liquor from them.

The other British *Orobus* may be found in *v.* 8. *t.* 518. We take this opportunity of announcing what we suppose a most unheard of variety of it with simple leaves, five times as large as its natural leaflets, found by Mr. Todd at Hafod. This variety cannot by any culture be made to flower. We are obliged to Sir Joseph Banks for suggesting to what plant it could possibly belong, and we have it in cultivation for further inquiry.





OROBUS *fylvaticus*.

Wood Orobus, or Bitter Vetch.

DIADELPHIA *Decandria*.

GEN. CHAR. *Style* linear, downy above. *Calyx* blunt at the base, its upper segments deeper and shorter.

SPEC. CHAR. Stems lying down, hairy, branched. Leaflets numerous.

SYN. *Orobus fylvaticus*. *Linn. Sp. Pl.* 1029. *Huds.* 314. *Lightf.* 390. *t.* 16. *With.* 630. *Dicks. H. Sicc. fasc.* 1. 12.

O. fylvaticus nostras. *Raii Syn.* 324.

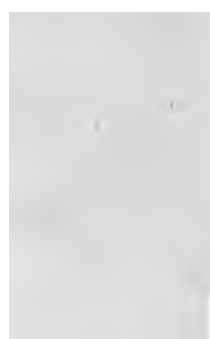
GATHERED by Mr. P. Harrison, druggist, of Darlington, at Gambleby, Cumberland (where Ray found it), and sent to us by Mr. Robson. It has also been found at Hafod, Cardigan-shire, by Mr. Todd, the intelligent gardener of T. Johnes, Esq.; nor does it appear to be very rare in the mountainous (not alpine) woods and thickets of Wales and Scotland. It flowers in May or June, and the seeds are quite ripe in July.

Root strong and perennial, producing a great number of spreading stems, which lie almost prostrate; they are angular, a little hairy, leafy, at first simple, but after flowering short leafy branches grow out of the bosoms of the leaves above the flower-stalks. The leaves are alternate, with a pair of half-arrow-shaped stipulæ at their base, and consist of numerous, mostly opposite, oblong, pointed leaflets, without a terminal one. Flowers in clusters, on solitary, axillary, simple, long, many-sided stalks. Each flower stands on a reddish drooping bracteated partial stalk. The calyx is rather more hairy than the stalks, but the hairiness of the whole herb is variable. The figure of Lightfoot however, as Mr. Robson observes, represents it too hairy all over. The flowers are of a delicate cream-colour, streaked and tinged with purple; the keel in particular is tipped with the last-mentioned colour. The pods are compressed, smooth, of a light brown, and contain from one to three seeds.



Vicia sativa L.





LATHYRUS Aphaca.

Yellow Vetchling.

DIADELPHIA Decandria.

GEN. CHAR. *Style* flattened, downy above, broader upwards. Two upper segments of the *calyx* shortest.

SPEC. CHAR. Stalks single-flowered. Tendrils without leaves. Stipulæ between heart- and arrow-shaped.

SYN. Lathyrus Aphaca. *Linn. Sp. Pl.* 1029. *Sm. Fl. Brit.* 763. *Hudf.* 315. *Wub.* 632. *Hull.* 160. *Relb.* 279. *Sibth.* 222. *Curt. Lond. fasc.* 5. t. 51. Aphaca. *Raii Syn.* 320.

FOUND in the borders of gravelly corn-fields, but rarely. Our specimen grew in Essex. Mrs. Kett has observed this plant in a gravel-pit in the road from Norwich to Brooke. The flowers appear from the end of May till towards August. The root is small and annual. Stem branched, weak, supported on other plants by its numerous alternate simple leafless tendrils, each of which springs from between a pair of large opposite sessile stipulæ, of an oblong triangular form, either quite entire, or slightly toothed on each side above their base. These stipulæ seem to perform the functions of leaves; for there are no others, except a pair of minute ovate leaflets, on one or two rudiments of tendrils, when the herb first springs up, and which soon wither away. These have been mentioned by Linnæus and Curtis, and the latter judiciously points out a similar phænomenon in a New Holland *Mimosa*. We now know several other such instances in that genus. See *Botany of N. Holland*, t. 15 and 16. and *Tr. of Linn. Soc.* v. 1. 253. The flowers of *L. Aphaca* are small, solitary, drooping and lemon-coloured; its calyx-teeth long and acute. The pod is smooth, like every part of the herbage, and the green of the whole has a glaucous tinge.



LATHYRUS Nissolia.

Crimson Grass-vetch.

DIADELPHIA Decandria.

GEN. CHAR. *Style* flattened, downy above, broader upwards. Two upper segments of the *calyx* shortest.

SPEC. CHAR. Flower-stalks single-flowered. Leaves simple. Stipulæ awl-shaped.

SYN. *Lathyrus Nissolia*. *Linn. Sp. Pl.* 1022. *Huds. Fl. An.* 315. *With. Bot. Arr.* 770. *Relb. Cant.* 271. *Catanance leguminosa quorundam, Raii Syn.* 325.

FOUND by the Countess of Ossory in a wood near Ampt-hill park, and communicated by T. Vaux, Esq. of Bedford.

The young plant, before flowering, is so like a grass that even an experienced botanist might mistake it for such; and it certainly escapes notice frequently, as Ray observes, by that means, though we think he speaks of this species as more common than it really is, in the borders of fields, among bushes, &c.

Its simple grassy leaves distinguish this from other plants of the same tribe. They are accompanied by a pair of very minute, awl-shaped, spreading stipulæ at their base. Sometimes, Mr. Hudson says, two flowers are found on one footstalk. They are of a beautiful rich crimson, very elegant in appearance; the pods long, linear, nearly cylindrical, and smooth, with many seeds; the root annual. The flowers appear early in May.

Linnaeus, in this instance, as in many others, has preserved an old generic name, *Nissolia*, given by Tournefort, as a trivial name, retaining its original feminine termination. Such trivial names, being substantives, ought always to begin with a capital letter. Many persons, for want of understanding this, have accused Linnaeus of writing false concords. Another example of the same is *Letus Corniculata*; some such word as *dictus* being always understood. We do not mean to commend such trivial names, expressive adjectives being undoubtedly better.



[1255]

LATHYRUS hirsutus.
Rough-podded Lathyrus.

DIADELPHIA Decandria.

GEN. CHAR. Style flattened, downy above, broadest upwards. Two upper segments of the *calyx* shortest.

SPEC. CHAR. Stalks two-flowered. Tendrils bearing a pair of linear-lanceolate leaves. Pods hairy. Seeds rough.

SYN. *Lathyrus hirsutus*. *Linn. Sp. Pl.* 1032. *Sm. Fl. Brit.* 764. *Huds.* 315. *With.* 633. *Hull.* 160.

L. siliquâ hirsutâ. Raii Syn. 320.

WILD specimens of this rare plant have been sent us by the Rev. Mr. Francis, from the borders of cornfields at Rawreth and Hockley, Essex, where it flowers in July. Ray found it in several parts of that county. Mr. Swayne is quoted by Dr. Withering as having observed it between Bath and Bristol.

The root is annual. Stem climbing by means of long, branched, hairy tendrils, broadly winged, hairy. Leaves two on each tendril, linear-lanceolate, with three principal nerves, hairy, sometimes smooth. Stipulæ half-arrow-shaped, narrow, hairy. Flower-stalks reaching beyond the leaves, bearing one or two drooping flowers, rarely three. Calyx hairy. Petals elegantly variegated with bright crimson and white. Style short and broad, with a very blunt permanent stigma. The rough and hairy pods distinguish this from every other British *Lathyrus*. The seeds also are rough.

We have many more conspicuous garden species of this genus, or the present might be thought not unworthy of cultivation on account of the delicacy and brilliancy of its flowers. It is easily raised like other hardy annuals.



Fig. 1. Pisum. Published by J. S. Edwards, London.





(670)

LATHYRUS pratensis.

*Meadow Vetchling.**DIADELPHIA Decandria.*

GEN. CHAR. *Style* flattened, downy above, broad upwards. Two upper segments of the *calyx* shortest.

SPEC. CHAR. Several flowers on a stalk. *Tendrils* mostly simple, each bearing two lanceolate leaves.

SYN. *Lathyrus pratensis*. *Linn. Sp. Pl.* 1033. *Huff.* 317. *With.* 633. *Hull.* 161. *Relb.* 273. *Sibth.* 223. *Abbot.* 157. *Curt. Lond. fasc.* 3. t. 44. *Mart. Fl. Rusl.* t. 52.

L. luteus sylvestris dumetorum. *Raii Syn.* 320.

COMMON in meadows, pastures, hedges and bushy places, especially in wet situations, flowering in July and August.

Root perennial, creeping, propagating itself very fast by means of small fleshy tubercles. Stems weak, branching, two or three feet long, climbing, leafy, smooth, sharply angular but not winged. Leaves lanceolate, rather glaucous, smooth.

670.





[3]

THE HISTORY OF THE CITY OF BOSTON

BY SAMUEL JOHNSON

THE HISTORY OF THE CITY OF BOSTON, FROM THE FIRST SETTLEMENT TO THE PRESENT TIME. BY SAMUEL JOHNSON, ESQ. OF BOSTON.

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LATHYRUS sylvestris.
Narrow-leaved Everlasting Pea.

DIADELPHIA Decandria.

GEN. CHAR. Style flattened, downy above, broader upwards. Two upper segments of the calyx shortest.

SPEC. CHAR. Several flowers on a stalk. Tendrils bearing a pair of sword-shaped leaves. Stem winged.

SYN. Lathyrus sylvestris. *Linn. Sp. Pl.* 1033. *Sm. Fl. Brit.* 765. *Huds.* 316. *Witb.* 634. *Hull.* 161. *Relb.* 272. *Sibth.* 222. *Abbot.* 156. *Curt. Lond. fasc.* 6. t. 52.

Lathyrus majoris species, flore rubente et albido minore, dumetorum. *Raii Syn.* 319.

SENT by Mr. Pitchford from Brundle, Norfolk, where it was first observed by Mr. Humphrey many years since, on the brow of a hill near a spring to the south of the church, and where it still grows in great plenty, flowering in July and August.

The roots are perennial, long and branching. The stems annual, climbing upon bushes or hedges to the height of 5 or 6 feet, branched, winged, smooth. Tendrils generally three-cleft, bearing a pair of sword-shaped, acute, three-ribbed, grass-green, smooth leaves. Stipulæ narrow, half-arrow-shaped, or rather half-hastate, entire. Flowers many together, on long axillary stalks, large and handsome, though less splendid than those of the *L. latifolius*. Their colours are various tints of purple and violet, with a tinge of green. Calyx smooth, with taper teeth. The pods are smooth, tawny when ripe, containing several seeds.

It is an ornamental plant, thriving well in moist shrubberies, but too apt to choke and overwhelm the bushes that afford it support.









LATHYRUS latifolius.
Broad-leaved Everlasting Pea.

DIADELPHIA Decandria.

GEN. CHAR. *Style* flattened, downy above, broader upwards. Two upper segments of the *calyx* shortest.

SPEC. CHAR. Several flowers on a stalk. Tendrils bearing a pair of elliptical leaves. Stem winged.

SYN. *Lathyrus latifolius*. *Linn. Sp. Pl.* 1033. *Sm. Fl. Brit.* 766. *Huds.* 316. *With.* 634. *Hull.* 161. *Relb.* 280. *Abbot.* 156. *Mart. Fl. Russ.* 1. 8.

L. major latifolius. *Raii Syn.* 319.

COMMUNICATED by the Rev. Dr. Abbot from Hawnes and Bromham, Bedfordshire. It is a rare and, as many persons think, a doubtful native, though Ray seems to have had sufficient authority to believe it indigenous. Possibly it may have escaped from gardens to some of the woodland situations where it now appears naturalized. Few British plants are more ornamental, either in a sunny exposure or shady situation, it being covered with beautiful rose-coloured flowers throughout July and August. The deeply branching roots continue for a great number of years without spreading from their original station, and throw up numerous annual climbing winged and branched stems, like those of *L. sylvestris*, t. 805. From that species it differs in being of a more glaucous hue, in having broad elliptical leaflets, more branching tendrils, and broader more ovate stipulæ. The flowers also are larger, of a much more vivid red colour, and have the lower teeth of their calyx somewhat more elongated.

The prodigious crop yielded by this plant, and the lasting nature of its roots even on a barren soil, seem to render it a fit object for agricultural experiments.





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LATHYRUS palustris.

Marsh Everlasting-Pea.

DIADELPHIA Decandria.

GEN. CHAR. *Style* flattened, downy above, broader upwards. Two upper segments of the *calyx* shortest.

SPEC. CHAR. Several flowers on a stalk. Several leaflets on each tendril. *Stipulæ* lanceolate.

SYN. *Lathyrus palustris.* *Linn. Sp. Pl.* 1034. *Hudf. Fl. An.* 317. *With. Bot. Arr.* 773. *Relb. Cant.* 273.

L. viciæformis, seu *Vicia Lathyroides nostras.* *Raii Syn.* 320.

THIS occurs in moist woods and pastures in several parts of England, but not commonly. Our specimen was sent from Burgh, near Yarmouth, by Dawson Turner, Esq. We have compared it, as well as some of Mr. Humphrey's original specimens gathered at Ranaugh (*see Hudf.*) with those of Linnæus, and find them to agree exactly, except in the number of flowers, the Swedish ones having, as Professor Retzius describes them, no more than three on each footstalk. Yet the very indifferent figure in *Flo. Dan.* (t. 399.) represents as many as thirteen, and those rather red than blue; so that one would think it could hardly be the same species, yet we know of no other like it.

Lathyrus palustris grows 3 or 4 feet high if supported by bushes; the stem but little branched, considerably winged. Leaflets 4 or 6, opposite, or rarely alternate, lanceolate, acute, glaucous beneath. Tendrils 2 or 3-cleft. *Stipulæ* lanceolate, but varying in breadth, their lower lobe a little falcated. Flowers of a vivid purplish blue of great beauty, in erect bunches. Pods longish and smooth, as is every part of the herbage. It thrives in a garden in good soil, even if not wet, and is very ornamental, flowering in the middle of summer, and continuing some time. The roots are perennial.



Pisum sativum



V I C I A *sylvatica*.*Wood Vetch.*D I A D E L P H I A *Decandria*.

GEN. CHAR. *Stigma* transversely bearded on the lower side.

SPEC. CHAR. Stalks many-flowered. Leaflets oval. Stipulæ denticulated.

SYN. *Vicia sylvatica*. *Lim. Sp. Pl.* 1035. *Huds. Fl. An.* 318. *With. Bot. Arr.* 774.

V. sylvatica multiflora maxima. *Raii Syn.* 322.

THIS Vetch, hitherto supposed peculiar to the mountainous parts of England and Wales, has at length been found in a wood near Newmarket, by the Rev. Mr. John Hemsted, a very intelligent and industrious botanist of that place, from whom this specimen was sent us by William Matthew, Esq. in the middle of June last. It flowers from that time to the middle of August. Dr. Smith gathered it in the hedges and thickets behind Saxton's bath at Matlock.

The perennial root throws out many weak, zigzag, striated, and much branched stems, six or seven feet high, which climb among the neighbouring bushes by means of compound tendrils at the ends of the leaf-stalks. The leaflets are exactly oval, or rather a little obtuse, tipped with a minute bristle; stipulæ very deeply toothed. Flowers very ornamental, whitish, elegantly streaked with purple and greyish blue. The keel is generally white tipped with blue. The pods are lanceolate, pale brown, and smooth. They appear in July and August. Mr. Woodward's description in the *Bot. Arr.* is a very accurate one.





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VICIA Cracca.

Tufted Vetch.

DIADELPHIA Decandria.

CHAR. *Stigma transversely bearded on the*
er side.

CHAR. *Stalks many-flowered. Flowers im-*
bricated. Leaflets lanceolate, downy. Stipulae
entire.

SYN. *Sp. Pl.* 1035. *Sm. Fl.*
Brit. 636. *Hull.* 161.
R *Abbot.* 157. *Curt. Lond.*
t. 117.

mental plant, in hedges and among ruins, more especially in a black boggy soil on a gravelly bottom, about osier-grounds, where the white *Convolvulus* grows. In such places the dense long spikes of purple flowers, toft up as it were into the air, are more remarkable than in any other situation. They are principally observable in July and August. The tall branching slender leafy stems are entangled among bushes and reeds, and strongly bound to them by long branched curling tendrils. Each leaf, which the tendrils terminate, consists of many lanceolate entire leaflets, more or less hoary with silky hairs. The stipule are small, half-arrow-shaped, most frequently entire, occasionally toothed. Flower-stalks angular and hairy, bearing many imbricated rather drooping flowers, whose various tints will repay a careful investigation. The pods are pendulous, smooth, of a light brown. Seeds globular, black.

Botanical writers have recommended this Vetch as very nutritious for cattle, but recent agriculturists have not yet attended to it. Indeed to gather it from its native situations would be impracticable, so firmly does it cling to its neighbours; and if cultivated in an open field, it would probably choke itself for want of support.



May 2. 1855. Published by J. E. Sowerby, London



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V I C I A sativa.

Common Vetch.

DIADELPHIA Decandria.

GEN. CHAR. *Stigma* transversely bearded on the lower side.

SPEC. CHAR. Pods sessile, nearly upright, generally in pairs. Lower leaves blunt. Stipulæ marked with a discoloured depression on the under side.

SYN. *Vicia sativa*. Linn. *Sp. Pl.* 1037. Huds. *Fl. An.* 318. *With. Bot. Arr.* 776. *Relh. Cant.* 274. *Sibth. Ox.* 224.

Vicia. *Raii Syn.* 320.

THIS is a wild specimen of the common *Vicia sativa*, so called because it is cultivated as an early fodder for cattle in various parts of Europe, and the seeds are the food of pigeons.

It varies much in size, and in the form as well as breadth of the leaves, which are sometimes inversely heart-shaped, sometimes (at least the upper ones) of an elliptic-lanceolate form. It is easily known by the depressed mark on the stipulæ, which looks as if made with a hot iron, and varies in colour from black to brown, and even yellow. The root is annual. Stems weak, procumbent if the tendrils meet with nothing to cling to for support, angular and furrowed, as are also the common foot-stalks of the leaves. Flowers in shades of elegant purple. The pods are more generally horizontal than erect.

Mr. Hudson's variety β of his *V. lathyroides* is generally agreed to be a variety of the *sativa*. Its pods are erect, black, cylindrical—the flowers deep red. We have received it from Weymouth by favour of Sir Thomas Cullum. The α of *V. lathyroides* Huds. seems to be the more common variety of *sativa* mentioned in Withering; but their synonyms are not very easily to be ascertained.



VICIA lathyroides.

*Spring Vetch.**DIADELPHIA Decandria.*

GEN. CHAR. *Stigma* transversely bearded on the lower side.

SPEC. CHAR. Pods sessile, solitary, erect, smooth. Leaflets six, the lowermost inversely heart-shaped. Seeds cubic, warty.

SYN. *Vicia lathyroides.* Linn. *Sp. Pl.* 1037. Jacq. *Misc. Austr.* v. 2. 299. t. 18. excellent. Var. γ . *Huds. Fl. An.* 319.

Vicia minima præcox Parisiensium. Rati *Syn.* 321. *Tournef. Inst.* 397.

Ervum solonienfe. Linn. *Sp. Pl.* 1040. *Huds. Fl. An. ed.* 1. 279.

NO British plant has been less understood than this *Vicia*, inasmuch that we dare not quote any authors except the above, it being altogether doubtful what others intend by their *Vicia lathyroides*; and most English botanists, even Mr. Hudson himself, having confounded it with small varieties of *Vicia sativa*.

Our plant is found on dry grassy banks, and in fallow fields on a gravelly soil, flowering early in May. The stems are numerous, generally prostrate. The stipulæ rarely, if ever, spotted. The seeds cubic, and rough with minute tubercles. The pods are smooth; leaves, stems, and stipulæ slightly hairy. There is no doubt of its being a most distinct species, sufficiently distinguishable by its seeds.

That this is the plant of Tournefort, and consequently *Ervum solonienfe* of Linnæus, which he took up from that author without having it in his own collection, appears from Tournefort's Herbarium at Paris. That it is the true *Vicia lathyroides*, is certain from the Linnæan Herbarium. *Dr. Smith.*

Our specimens were sent from Norwich by Mr. Pitchford, one of the first English botanists who well distinguished this plant. Mr. Dickson has found it in the dry parts of Hyde Park. It is annual, and scarcely to be met with after the month of June. There is a variety with white flowers.



L. demissa Del. 1791



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VICIA lutea.

*Rough-podded Yellow Vetch.**DIADELPHIA Decandria.*

GEN. CHAR. *Stigma* transversely bearded on the lower side.

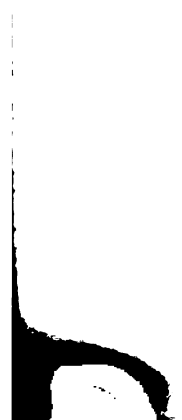
SPEC. CHAR. Pods sessile, solitary, reflexed, hairy. Stems diffuse. Stipulæ blood-red. Standard of the flower smooth.

SYN. *Viciæ luteæ*. *Linm. Sp. Pl.* 1037. *Huds.* 319. *With.* 639.

THE late Mr. Humphrey of Norwich found this plant many years ago on the beach at Orford, Suffolk, on the side next the river, about a mile from the haven's mouth. It has since been met with at Aldborough, by the Rev. Mr. Burroughes. Our specimens were gathered at Weymouth, by the Rev. Mr. Baker and A. B. Lambert, Esq. in August 1795. We know of no other British stations of the *V. lutea*, the plant found on Glastonbury Tor hill being the *hybrida*.

The root is perennial, long, dividing at the top, among the loose pebbles where it grows, into several diffuse, angular, smooth, leafy stems, often two or three feet long, but little branched. Some of the branches are always subterraneous, producing colourless condensed *gemma* rather than flowers, which however form seeds as in *Lathyrus amphicarpos*, and some other vetches. The leaves are composed of numerous, opposite or alternate, pointed or bluntish leaflets, hairy beneath, with a branched tendril at the end of their common foot-stalk. Stipulæ triangular, generally stained externally, more or less deeply, with a blackish red hue; some of them however are green. Flowers axillary, solitary, sessile, pale yellow, but generally more or less streaked and stained with a blueish grey or purple; very rarely they are all over grey. Pods reflexed, clothed with short hairs arising from small tubercles. The seeds are from five to eight, oval, bitter and astringent in a young state.





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V I C I A hybrida.

*Hairy-flowered Yellow Vetch.**DIADELPHIA Decandria.*

GEN. CHAR. *Stigma* transversely bearded on the lower side.

SPEC. CHAR. Pods sessile, solitary, reflexed, hairy. Stipulæ green. Standard of the flower hairy. Leaflets emarginate.

SYN. *Vicia hybrida*. *Linn. Sp. Pl.* 1037. *Jacq. Hort.* t. 146.

V. luteo flore sylvestris. Raii Syn. 321.

GATHERED by A. B. Lambert, Esq. in June 1797, on Glastonbury Tor hill, Somersetshire, as mentioned by Ray; for our specimens prove the plant of Ray to be *V. hybrida*, and not *lutea* as Hudson thought. Indeed it appears the last-mentioned author never knew the real *hybrida*, as it does not grow at Weymouth; and we have detected what he gathered there for this species to be another, hitherto nondescript, as will appear in the next page.

The plant now before us has generally taller and rather more upright stems than *V. lutea*, which it otherwise very nearly resembles in habit and leading characters. The flowers are generally yellow, streaked a little with pale purplish red; we know not that they ever vary to grey or purple. They are essentially characterised by the back of their standard or *vexillum* being hairy. Another mark of this species is the stipulæ being entirely green. The leaflets vary greatly in shape, as in most of this tribe, but are always more obtuse and emarginate than those of *V. lutea*. As in that species, they are hairy, as well as the pods. The root is perennial.



Leg. pinnatifida, Linn.



[18]

Y. I. O. A. 1874

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V I C I A lævigata.

Smooth-podded Sea Vetch.

D I A D E L P H I A Decandria.

GEN. CHAR. *Stigma* transversely bearded on the lower side.

SPEC. CHAR. Pods sessile, solitary, reflexed, smooth. Stems upright. *Stipulæ* greenish. Leaves smooth.

SYN. *Vicia hybrida*. *Huds.* 319. *With.* 639.

THIS specimen was gathered on the beach at Weymouth, by the Rev. Mr. Baker, in August 1792. On the authority of an original specimen sent to Dr. Pulteney by the late Mr. Hudson, we pronounce it his *V. hybrida*, and consequently that of Dr. Withering, who in this instance has relied on the *Flo. Anglica*. In fact, many persons who have found this *Vicia* at Weymouth have taken it for *hybrida*; others have supposed it *bithynica*; though it answers to the characters of neither. The true *bithynica* is also found at Weymouth. It appears by Mr. Lightfoot's herbarium, now in her Majesty's possession, that he was well acquainted with our *V. lævigata*. The Rev. Dr. Goodenough has also communicated to us cultivated specimens, and from long observation is convinced of the certainty of the species.

The stems of *V. lævigata* are only from six to twelve inches long, upright and always much less diffuse than those of *V. lutea*. Leaves and whole plant entirely smooth. *Stipulæ* green, or pale brown. Flowers like those of the *lutea*, but their calyx-teeth are generally more equal in length. In colour they are for the most part less yellow, and sometimes quite blue; but both species are so extremely variable in that respect, we have rather expressed the two extremes of colour common to both. The pods are readily known by being quite smooth in every stage of their growth, and contain rarely more than five seeds. It is perennial, flowering from July to September. The young seeds are bitter and astringent, as in the other species just mentioned.

Scopoli's *V. grandiflora* appears to us too uncertain to be referred to any of our species. Although Linnæus in *Sp. Pl.* mentions his *V. lutea* as varying sometimes with almost smooth pods, which we have not remarked in that, we have no authority to suppose he confounded our *lævigata* with it.



Pisum sativum L. *P. sativum L.*



1891

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1891

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1891

[1515]

VICIA sepium.

*Bush Vetch.**DIADELPHIA Decandria.*

GEN. CHAR. *Stigma* transversely bearded on the lower side.

SPEC. CHAR. Pods about four on a stalk, upright, smooth. Leaflets ovate, obtuse; gradually smaller upwards.

SYN. *Vicia sepium.* Linn. *Sp. Pl.* 1038. Sm. *Fl. Brit.* 773. Huds. 320. With. 637. Hull. 161. Relh. 282. Sibth. 224. Abbot. 158.

V. sepium perennis. Halli *Syn.* 320.

COMMON among bushes by road sides, and about hedges, flowering in May and June.

Root perennial, somewhat creeping. Stems about 2 feet high, weak, but little branched, leafy, furrowed, supporting themselves on other plants by means of the branched tendrils which terminate the footstalks of their leaves. Leaflets numerous, ovate, obtuse, thin, hairy, gradually smaller towards the end of each stalk. Stipulæ more or less lunate and toothed. Flowers axillary, 3 or 4 on a short stalk, all leaning one way. Calyx dull purple, hairy. Corolla variegated with blue, purple, and greenish white. Pods when ripe nearly upright, brown, dotted, destitute of hairs. Seeds globular, smooth.

We know of no valuable qualities that belong to this Vetch, nor has it attracted the notice of cultivators. We have never seen the white variety mentioned in Ray's *Synopsis*, p. 478.



Vicia sativa L. *Leguminosae* *Leguminales*

↩



56.
[1842]

VICIA bithynica.
Rough-podded Purple Vetch.

DIADELPHIA Decandria.

GEN. CHAR. *Stigma* transversely bearded on the lower side.

SPEC. CHAR. Pods solitary, upright, rough, on stalks. Leaflets two pair, lanceolate approaching to elliptic. Stipulas toothed.

SYN. *Vicia bithynica*. *Linn. Sp. Pl.* 1038. *Sm. Fl. Brit.* 774. *Huds.* 320. *With.* 639. *Hull.* 162. *Jacq. Hort. Vind. t.* 147.

THIS rare Vetch occurs in two very different situations in England, in fields near the sea in Dorsetshire and Hampshire, from whence Mr. W. Borrer sent it in May and June last; and in hedges or bushy places in Yorkshire and Worcestershire. The Rev. Dr. Abbot found it under almost every hedge on the estate of Mr. Harris at Chocken-hall, in the county last mentioned.

Roots perennial, branching, with small fleshy knobs. Stems weak, climbing by means of branched tendrils terminating the leaf-stalks. Leaflets 2 pair on each stalk, varying much in breadth from a linear-lanceolate to almost an elliptical shape; slightly hairy at the back. Stipulas large, deeply toothed, half arrow-shaped. Flowers on solitary, generally simple, stalks, large and handsome, especially when fresh; but in 12 hours after they are gathered, the pure white of the keel and wings, only tipped or tinged with blue or violet, turns greenish or brownish, no longer contrasting elegantly with the purple standard. The pods are hairy and rough, each containing 5 or 6 speckled seeds. The fruit-stalks vary in length.



Pisum sativum L. Published by J. S. Sowerby London.

57.
[1223]

ERVUM tetraspermum.

Smooth Tare.

DIADELPHIA Decandria.

GEN. CHAR. *Stigma* capitate, hairy all over.

SPEC. CHAR. Stalks two-flowered. Pods smooth, each containing several seeds.

SYN. *Ervum tetraspermum*. Linn. *Sp. Pl.* 1039. Sm. *Fl. Brit.* 775. Huds. 320. With. 639. Hull. 166. Relh. 282. Sibth. 225. Abbot. 159. Curt. *Lond. fasc.* 1. t. 55.

Cracca minor, *siliquis singularibus*, *flosculis cærulescentibus*. Raii *Syn.* 322.

IF the *Ervum hirsutum*, t. 970, be formidable to the farmer as a weed, on account of its extreme luxuriance and fertility, this is equally or more so; for its pods are almost as plentiful, and bear 4 seeds instead of 2.

The root is annual, and the flowers begin to appear in June. Stem branched, weak, climbing, square, hairy. Leaflets numerous, alternate, obtuse, hairy beneath, their common stalk ending in a branched tendril. Flowers in pairs on long slender axillary stalks, drooping, pale-blue, veiny. Calyx hairy. Pods oblong, pendulous, smooth, containing 4 seeds, sometimes more. We have from Mr. Woodward what seems a variety with from 5 to 7 seeds in each pod, and rather larger flowers than usual. It grew on a barren gravelly soil in Huntingdonshire.

The English names of these two species of *Ervum*, Smooth Tare, and Hairy Tare, apply to the pods, and not to any other parts of the plant, for the herbage is most hairy in that now before us.



Dec 1 1873 Published by J. L. Conroy, London





[97°]

ERVUM hirsutum.

Hairy Tare.

DIADELPHIA Decandria.

GEN. CHAR. *Stigma* capitate, hairy all over.

SPEC. CHAR. Stalks many-flowered. Pods hairy, each containing two seeds.

SYN. *Ervum hirsutum*. Linn. *Sp. Pl.* 1039. *Sm. Fl.**Brit.* 776. *Hudf.* 321. *With.* 640. *Hull.* 166.*Relb.* 275. *Sibth.* 225. *Abbot.* 159. *Curt. Lond.**fasc.* 1. t. 54. *Dickf. H. Sicc. fasc.* 8. 13.*Cracca minor.* *Raii Syn.* 322.

BUT too common in corn-fields, to which in wet seasons it is particularly destructive; it also grows in various kinds of cultivated ground, and also about hedges. It flowers and seeds copiously from June till autumn.

Root annual. Stems branched from the bottom, weak, angular, nearly smooth, leafy, climbing by means of branched tendrils which terminate the common footstalks. Leaflets numerous, alternate, elliptical, notched at the end. Stipulæ half-halberdshaped, occasionally toothed. Flowers from about 5 to 7 on a longish axillary stalk, small, pale blue, with a dark spot on each side of the point of the keel. Calyx not quite so long as the corolla, with 5 narrow teeth. Pods pendulous, short, compressed, hairy, containing two prominent seeds.

The essential character of this genus is unquestionably the capitate stigma, hairy on all sides; for the Linnæan mark, "calyx in 5 divisions the length of the corolla," only agrees with *Ervum Lens*, which is a true *Cicer*, and the remaining species, except *hirsutum* and *tetraspermum*, will be found to agree much better both in habit and character with other genera. See *Fl. Brit.* 776.



Lin. 1. 180. 2. 181. 3. 182. 4. 183. 5. 184. 6. 185. 7. 186. 8. 187. 9. 188. 10. 189. 11. 190. 12. 191. 13. 192. 14. 193. 15. 194. 15. 195. 16. 196. 17. 197. 18. 198. 19. 199. 20. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841. 842. 843. 844. 845. 846. 847. 848. 849. 850. 851. 852. 853. 854. 855. 856. 857. 858. 859. 860. 861. 862. 863. 864. 865. 866. 867. 868. 869. 870. 871. 872. 873. 874. 875. 876. 877. 878. 879. 880. 881. 882. 883. 884. 885. 886. 887. 888. 889. 890. 891. 892. 893. 894. 895. 896. 897. 898. 899. 900. 901. 902. 903. 904. 905. 906. 907. 908. 909. 910. 911. 912. 913. 914. 915. 916. 917. 918. 919. 920. 921. 922. 923. 924. 925. 926. 927. 928. 929. 930. 931. 932. 933. 934. 935. 936. 937. 938. 939. 940. 941. 942. 943. 944. 945. 946. 947. 948. 949. 950. 951. 952. 953. 954. 955. 956. 957. 958. 959. 960. 961. 962. 963. 964. 965. 966. 967. 968. 969. 970. 971. 972. 973. 974. 975. 976. 977. 978. 979. 980. 981. 982. 983. 984. 985. 986. 987. 988. 989. 990. 991. 992. 993. 994. 995. 996. 997. 998. 999. 1000.





ORNITHOPUS perpusillus.

*Common Bird's-foot.**DIADELPHIA Decandria.*GEN. CHAR. *Pod jointed, cylindrical, curved.*SPEC. CHAR. *Leaves pinnated. Pods curved upwards.*

SYN. *Ornithopus perpusillus.* Linn. *Sp. Pl.* 1049.
Huds. Fl. An. 321. *With. Bot. Arr.* 782. *Relh.*
Cant. 276. *Sibth. Ox.* 225. *Curt. Lond. fasc.* 6.
t. 53.

Ornithopodium radice nodosa. Raii Syn. 326.

THIS pretty little flower prefers a gravelly or sandy soil, growing among grass in dry open pastures abundantly, as in Hyde Park beyond the spring, where it may be found in perfection in May, and occasionally to the end of summer.

Root annual; small and fibrous, sometimes, according to the observation of Doody in Ray's Synopsis, propagating itself by little fleshy tubercles, like those of *Vicia lathyroides*, see our *tab.* 30, in which case it does not ripen seed. Stems more or less procumbent, very various in length and luxuriance, leafy, downy. Leaves alternate, of about 5 to 10 or 12 pair of small elliptical leaflets, with a terminal one of the same size and figure, hairy, especially on the back. Stipulæ none. Flowers sessile in little terminal umbels, accompanied by a leaf. Standard and wings elegantly striped with red and white; keel greenish. Stigma capitate, naked. Pods a little curved upwards, with a very short beak; their joints tumid, so as to render them somewhat like a string of beads; in all which particulars they differ from *O. compressus* of Linnæus, which some botanists have suspected our English plant to be, but we have ascertained it by his herbarium to be *O. perpusillus*.



HIPPOCREPIS comosa.

Tufted Horseshoe Vetch.

DIADELPHIA Decandria.

GEN. CHAR. *Pod* compressed, with many deep notches in one of its edges.

SPEC. CHAR. Pods pedunculated, clustered, curved, waved in the external margin.

SYN. Hippocrepis comosa. *Linn. Sp. Pl.* 1050. *Huds. Fl. An.* 321. *With. Bot. Arr.* 783. *Relb. Cantab.* 276.

Ferrum equinum germanicum filiquis in summitate. Raii Syn. 325.

PLENTIFUL on dry chalky banks and hills in Kent, Cambridgeshire, and other parts of England; but being found in no other kind of soil, it is reckoned among the rarer English vegetables. The root is long, woody, and apparently perennial, as most authors make it. Stems numerous, and procumbent. Flowers pale yellow streaked with brown, far less specious than those of *Lotus corniculatus*; with which they are generally intermixed, and may therefore be easily overlooked. But when the pods appear, their singular figure cannot fail to strike the most casual observer. The flowers are to be met with from May to August; the pods most part of the summer and autumn.

The descriptions of *Hippocrepis comosa* quoted in the Botanical Arrangement are very good, and all certainly belong to the same species.



Chamaecrista 1791



HEDYSARUM Onobrychis.

Saint-Foin.

DIADELPHIA Decandria.

GEN. CHAR. *Keel of the Corolla* transversely obtuse.
Pod jointed, with one seed in each joint.

SPEC. CHAR. Leaves pinnated. Pod single-seeded,
prickly. Wings of the corolla equal to the calyx.
Stem elongated.

SYN. *Hedysarum Onobrychis.* Linn. *Sp. Pl.* 1059.
Huds. Fl. An. 322. *With. Bot. Arr.* 785. *Relb.*
Cant. 277. *Martyn. Fl. Rust. tab.* 47.

Onobrychis feu *Caput gallinaceum.* *Raii Syn.* 327.

A NATIVE of chalky pastures and open downs in various parts of England, always in dry barren situations, which its flowers greatly enliven about June and July.

The plant is readily distinguished from all others of British growth; and if any doubt could remain, the ample and exact descriptions of Dr. Withering and Mr. Woodward must entirely remove it.

This is a valuable plant for cultivation in dry barren soils for feeding cattle, as it grows luxuriantly where grass or corn would yield but a small produce. Professor Martyn mentions in his valuable *Flora Rustica* above quoted, that its cultivation began with us about the middle of last century, and though a native plant, its seeds were then procured from France and Flanders.





ASTRAGALUS glycyphyllos.

Sweet Milk-Vetch, or Wild Liquorice.

DIADELPHIA Decandria.

GEN. CHAR. Pod of two cells, swelling.

SPEC. CHAR. Stem prostrate. Pods somewhat triangular, curved. Leaves longer than the spikes of flowers; leaflets oval.

SYN. Astragalus glycyphyllos. *Linn. Sp. Pl.* 1067. *Huds. Fl. An.* 322. *With. Bot. Arr.* 787. *Relb. Cant.* 277. *Sibth. Oxon.* 227.

A. luteus perennis procumbens, vulgaris five sylvestris. *Raii Syn.* 326.

FOUND about way sides, borders of fields, and similar places, on a chalky or gravelly soil in various parts of England, less frequently in Scotland. It is perennial, and flowers in June; the seeds ripen about August.

The stems growing prostrate among grass and bushes, added to the greenish hue of the whole plant, cause it to be frequently overlooked, though often extending 2 or 3 feet in length. They are more or less zigzag, angular and striated. Leaves alternate, consisting of about 5 to 7 pair of roundish or oval leaflets, with an odd one at the end, and a pair of ovate pointed stipulæ at the base. Spikes of flowers arise from the bosoms of the leaves, solitary, on foot-stalks, shorter than the adjoining leaf. The flowers are pale sulphur-coloured, often with a brownish tinge. Pods reddish, inflated, containing many seeds.

The leaves when chewed have a sweetish taste, which soon changes to a nauseous bitter. Cattle are not fond of them.



F. Scaevola del Sep. 1799



ASTRAGALUS hypoglottis.
Purple Mountain Milkwort.

DIADELPHIA Decandria.

GEN. CHAR. Pod of 2 cells, swelling.

SPEC. CHAR. Stem prostrate. Flowers in round heads. Pods ovate, with a channel along the back, compressed, hairy; tip reflexed.

SYN. Astragalus hypoglottis. *Linn. Mant.* 2. 274.
Sibth. Fl. Oxon. 227.

A. arenarius. *Hudf. Fl. An.* 323. *Relb. Cant.* 278.
Fl. Dan. 1. 614.

A. Danicus. *Retz. Obs.* 3. 41. *Witb. Bot. Arr.* 787.

A. incanus parvus purpureus nostras. *Raii Syn.* 326.
t. 12. f. 3.

THIS elegant little plant abounds on our dry heaths, as in the chalky tracts of Cambridgeshire, and on some elevated gravelly or sandy spots of Scotland as well as England, flowering throughout June and July. By the synonyms above cited it appears to have been much misunderstood, which arose from Linnæus's referring Ray's figure and description to his *arenarius*, and in such mistakes Mr. Hudson often too implicitly followed him. Linnæus afterwards strangely confounded it with *epiglottis*; but at length atoned for all by his excellent description in the *Mantissa altera*, where he first gives it as a new species by the name of *hypoglottis*, which Dr. Sibthorp learned from the Linnæan herbarium.

Roots perennial, branched, long, slender and creeping. Stems zigzag, but little branched, procumbent, angular, hairy, set with alternate, spreading, pinnated leaves, of about 6 pair or more of elliptic-ovate, bluntish leaflets, gradually lessening, and with a smaller odd terminal one; they are clothed with white close hairs beneath, but nearly smooth above. The *Flora Danica* represents them oval and very sharp, with the usual indiscriminative sweeping cut of that work, so like the figures of Sir John Hill. Heads of flowers one or two on each stem, erect, axillary, solitary, scarcely longer than the leaves till after flowering. Bractææ ovate, acute. Stalk and calyx clothed with black hairs mixed more or less with white ones, as in many exotic species. Corolla of a beautiful purple. Pods (which are not very well drawn by Dillenius in Ray's *Synopsis*) erect, ovate, triangular, the two outermost angles brought together so as to form a channel, the tip sharp, curved backward, whole surface black and rough, clothed with long whitish prominent hairs. The flowers sometimes vary to white.



Fig. 179. 9



ASTRAGALUS uralensis.

Hairy Mountain Milkwort.

DIADELPHIA Decandria.

GEN. CHAR. Pod of two cells, swelling.

SPEC. CHAR. Stem none. Stalk upright, longer than the leaves. Pods oblong, hairy, erect.

SYN. Astragalus uralensis. Linn. Sp. Pl. 1071. Hudf. 323. With. 644. Lightf. 401. t. 17.

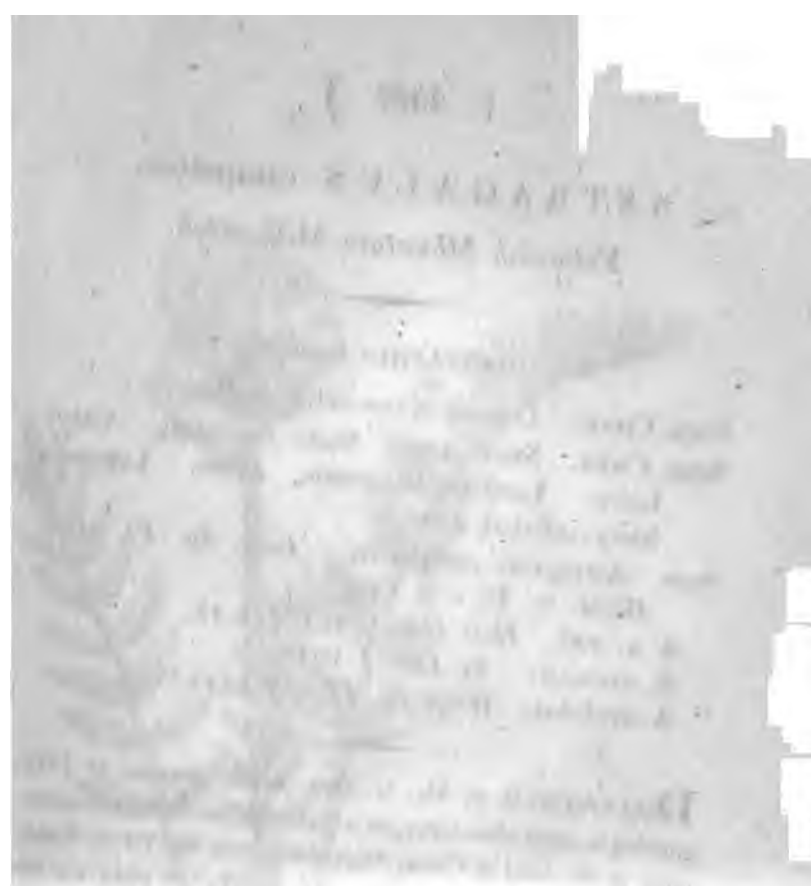
THIS has been found, chiefly in a sandy soil, on various mountains of Scotland; it was sent by the late Dr. Hope to Linnæus, and we have received it from Mr. Mackay and Mr. Bruce.

The root is strong, woody and perennial, dividing at the crown into several leafy tufts. Leaves all radical, spreading, pinnate: leaflets sessile, generally opposite, the lowermost often more remote and sometimes alternate, the terminal one generally smaller than the rest; all of them are ovate, sometimes lanceolate, entire, acute, a little concave above, clothed all over, but especially beneath, with silky hairiness, as is the common footstalk likewise, which is often more permanent than the leaflets, hardening into a sort of spine. It has a pair of broad membranous stipulæ at the base. Stalk simple, hairy, upright, a little longer than the leaves, bearing a short simple spike (erroneously represented branched in Lightfoot's figure) of handsome purple flowers, whose calyx is clothed with a mixture of black and white hairs. Bractææ lanceolate, hairy. Pods erect, inflated, cylindrical, rather more than half an inch long, terminating in a sharp oblique point, thickly clothed with brown close-pressed hairs. It flowers in July.

Copious wild specimens of this plant from Mr. Bruce, as well as those of Dr. Hope, being compared with the two original Siberian ones of Linnæus, leave not the least doubt of its being his *A. uralensis*, though his are more luxuriant than ours, as also those described in the *Hortus Upsaliensis*, copied by Dr. Withering, appear to have been. Hence arose some uncertainty respecting the identity of the Scotch *Astragalus*, which we are happy to remove. A Swiss specimen from Mr. Davall proves it also to be the No. 410 of Haller, as quoted by all authors.



Ononis spinosa L.



ASTRAGALUS campestris.

Yellowish Mountain Milk-vetch.

DIADELPHIA Decandria.

GEN. CHAR. *Legume* of two cells, swelling.

SPEC. CHAR. Stem none. Stalk ascending. Calyx hairy. Leaflets lanceolate, acute. Legumes hairy, inflated, erect.

SYN. Astragalus campestris. Linn. Sp. Pl. 1072.
Willd. Sp. Pl. v. 3. 1317.

A. n. 406. Hall. Hist. v. 1. 177. t. 13.

A. uralensis. Fl. Dan. t. 1041.

A. sordidus. Willd. Sp. Pl. v. 3. 1313 ?

DISCOVERED by Mr. G. Don, in the summer of 1812, growing in great abundance, on a high rock, on one of the mountains at the head of Clova, Angusshire, near the White Water. The Bishop of Carlisle, to whom this new British plant was first sent, very justly determined it to be the *A. campestris*, and the plant of Haller, both which points we have confirmed by authentic specimens. There can scarcely be more doubt of its being the *uralensis* of Vahl in *Fl. Dan.* and therefore, we presume, *sordidus* of Willdenow, who has fallen into much error respecting this and our *uralensis*, t. 466.

The present is, as Mr. Don observes, a very splendid species. Its specific characters however are not easy to seize upon. The stalk is ascending, rather than erect, and sometimes decumbent. Flowers cream-coloured or buff, with more or less of a purple tinge on the keel and wings, discernible in Mr. Don's dried specimens, as well as in foreign ones, and mentioned by Linnæus and Haller. The leaflets are lanceolate, or somewhat ovate, acute, more or less silky. Legume more ovate and inflated than in *uralensis*, covered with short, spreading, black as well as white hairs.





TRIFOLIUM officinale.

*Common Melilot.**DIADELPHIA Decandria.*

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. *Pods* spiked, naked, rugged, acute, containing two seeds. *Stem* erect.

SYN. *Trifolium officinale*. *Sm. Fl. Brit.* 781. *Relh.* 286.

T. Melilotus-officinalis. *Linn. Sp. Pl.* 1078. *Huds.* 323.

With. 645. *Hull.* 162. *Sibth.* 227. *Abbot.* 161.

Mart. Rust. t. 72.

Melilotus vulgaris. *Raii Syn.* 331.

FREQUENT in bushy places, borders of fields, and sometimes among corn, flowering in June and July. It was formerly cultivated as a crop, and has very lately come into fashion again in some places. When dry it has the smell of hay, but in a peculiarly strong degree, approaching the flavour of bitter almonds. The seeds have the same flavour, and render it, as Professor Martyn observes, a very bad weed among bread corn, to which they powerfully communicate their taste.

Root annual. Stem erect, rather slender, furrowed, branched, leafy. Leaves ternate, (very rarely we have seen 5 together,) on stalks; the leaflets obovate, narrow, serrated, smooth. Flowers in long, axillary, stalked spikes, yellow, all drooping toward one side, with small bractæ. Calyx and partial stalks hairy. Stigma obtuse. Pod pendulous, elliptical, tapering at each end, transversely wrinkled, hairy. Seeds two.







TRIFOLIUM ornithopodioides.

Bird's-foot Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. *Pods* naked, eight-seeded, about three together, twice as long as the calyx. *Stems* procumbent.

SYN. *Trifolium ornithopodioides.* Linn. *Sp. Pl.* 1078. *Sm. Fl. Brit.* 782. *Huds.* 324. *Willd.* 645. *Hull.* 162. *Curt. Lond. fasc.* 2. t. 53.

Fœnugræcum humile repens, Ornithopodii filiquis brevibus erectis. *Raii Syn.* 331. t. 14. f. 1.

PROBABLY, as Mr. Curtis observes, the small size, and, we may add, the prostrate position, of this Trefoil, may have caused it to be thought more rare than it really is. It grows on barren gravelly heaths among short grass, flowering in June and July, and is annual. Our specimen came from Black-heath.

The fibrous root is furnished with small fleshy knobs, as in *Vicia latyroides* and some others of this class, apparently to resist accidental drought during summer. The stems spread close to the ground, and are smooth, leafy, mostly unbranched. Leaves on long stalks, with lanceolate, pointed, united stipulæ; their leaflets obcordate, ribbed, more or less serrated, smooth. Flower-stalks axillary, short, bearing 2 or 3 slender reddish flowers in an umbel. Calyx-teeth long and taper. Petals with long claws. Pod oblong, blunt, transversely rugged, almost twice as long as the calyx, and containing about 8 seeds; circumstances which, while they prevent our confounding this with any other British *Trifolium*, render it very difficult to construct a generic character which may comprehend all the species which Nature has stamped with the habit and general structure of the genus.

1047.





[1769]

TRIFOLIUM repens.

*White Trefoil, or Dutch Clover.**DLADELPHIA Decandria.*

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. Heads umbellate. Pods with four seeds. Stem creeping.

SYN. *Trifolium repens.* Linn. *Sp. Pl.* 1080. *Sm. Fl. Brit.* 782. *Huds.* 324. *With.* 646. *Hull.* 163. *Relh.* 286. *Sibth.* 228. *Abbot.* 161. *Curt. Lond. fasc.* 3. t. 46. *Mart. Rust.* t. 34.

T. pratense album. *Raii Syn.* 327.

VERY common in meadows and pastures, flowering from May to September, and varying excessively with regard to luxuriance, as well as in the white or dark purplish marks upon its leaves.

Root fibrous, perennial. Stems prostrate, creeping very extensively, branched near their origin, round, smooth, leafy. Leaves alternate, on long upright stalks. Leaflets on small partial stalks, inversely heart-shaped, or roundish, finely toothed, smooth. Flower-stalks longer than the leaves, angular, each bearing a dense round-headed umbel, of many cream-coloured flowers, rarely reddish, pendulous in decay. Calyx smooth, with 10 ribs. Pod oblong, smooth, containing 3 or 4 seeds, and invested with the brown permanent corolla.

In rich moist soil, in osier-holts, &c., it sometimes acquires a more upright and luxuriant stem, but still remains distinct from the Linnæan *T. hybridum*, with which some have confounded it.

This plant is valuable for supplying cattle with fodder in the dry autumnal months, and forms, as Professor Martyn observes, an excellent bottom in pastures.



July 1887. Published by J. & S. Sowerby, London.





TRIFOLIUM subterraneum.
Subterraneous Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. Heads hairy, of about four flowers. Involucrum central, reflexed, rigid, star-like, embracing the fruit.

SYN. *Trifolium subterraneum.* *Linn. Sp. Pl.* 1080.
Sm. Fl. Brit. 783. *Huds.* 328. *With.* 647.
Hull. 163. *Relb.* 279. *Sibth.* 228. *Abbot.* 161.
Curt. Lond. fasc. 2. t. 54.

T. pumilum supinum, flosculis longis albis. *Raii*
Syn. 327. t. 13. f. 2.

MORE generally abundant than the preceding in the same kinds of situations; in Greenwich park, Hyde park, and on Blackheath, its white flowers are visible among the short grass in May, at the same time that *Sagina erecta* puts forth its pearly blossoms.

The root is annual, furnished with knobs like the last. Stems prostrate, spreading close to the ground, almost concealed by the broad sheathing stipulæ of the numerous leaves. Leaflets obcordate, hairy on both sides, entire. Flower-stalks bearing 3 or 4 flowers, at first erect, but before the fruit ripens they are bent to the ground, producing from their extremities little white thick fibres, star-like at their tips, which become recurved and rigid, enveloping the fruit. These look so like roots, that, till Mr. Curtis explained their economy, every body mistook them for such, and Dillenius (aware that the plant, being an annual, did not propagate itself by these supposed roots) conjectured they might draw moisture to nourish the seed. The long slender milk-white petals render this species conspicuous, though, when first seen, they are seldom taken for the flowers of a Trefoil. The calyx-teeth are long and hairy. Pod thin, containing one dark-brown seed.



July 1 1852 Published by J. J. Sowerby, London.





TRIFOLIUM ochroleucum.

Sulphur-coloured Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. *Flowers* in a hairy head. Stem erect, downy. Lower leaflets inversely heart-shaped. Lower tooth of the calyx very long.

SYN. *Trifolium ochroleucum.* Linn. *Syst. Nat.* ed. 12. v. 3. 233. Sm. *Fl. Brit.* 784. Huds. 325. With. 653. Hull. 164. Relh. 287. Abbot. 162. Curt. Lond. fasc. 6. t. 49. Mart. *Fl. Rust.* t. 35. Dicks. *H. Sicc. fasc.* 3. 9.

T. pratense hirsutum majus, flore albo-sulphureo. Raii *Syn.* 328.

SENT from Clapham, Bedfordshire, by the Rev. Dr. Abbot. It is a native of dry gravelly and chalky soils among bushes, flowering in June and July, and is in no respect worthy of attention as an object of culture.

The root we believe to be perennial, and it branches at the top so as to bear several stems, each of which is erect, straight, 12 or 18 inches high, but little branched, round and hairy. Leaves remote; the uppermost only opposite. Stipulæ large, combined, clasping the stem, sharp-pointed, downy, ribbed with simple nerves. Lower foot-stalks long, bearing broad, inversely heart-shaped, entire, hairy, leaflets; the upper leaflets are longer and narrower. Head of flowers terminal, solitary, stalked, erect, hemispherical, dense. Calyx slender, furrowed, hairy, with taper teeth, of which the lowermost is about thrice as long as the rest. Petals joined at the base, narrow, of a peculiar pale buff or faint sulphur-colour, by which the species is known at once from all others of British



Oct 2. 1863. Published by J. L. Sowerby, London



[1770]

TRIFOLIUM pratense.

Common Purple Clover, or Honeysuckle Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. *Spikes* dense. *Stems* ascending. *Parts* of the corolla unequal in length. Four of the calyx-teeth equal. *Stipulas* awned.

SYN. *Trifolium pratense*. *Linn. Sp. Pl.* 1082. *Sm. Fl. Brit.* 785. *Huds.* 325. *With.* 651. *Hull.* 163. *Relh.* 287. *Sibth.* 228. *Abbot.* 162. *Afzel. in Tr. of L. Soc. v.* 1. 240.

T. pratense purpureum. *Raii Syn.* 328.

β. *T. pratense.* *Mart. Rust. t.* 3. *Fl. Dan. t.* 989.

T. purpureum majus sativum, pratensi simile. *Raii Syn.* 328.

γ. *With a white flower.* *With.* 652.

δ. *Trifolium pratense purpureum minus, foliis cordatis.* *Dill. in Raii Syn.* 328. *t.* 13. *f.* 1.

WE have been careful to procure a genuine wild specimen of this plant from the calcareous hills above Matlock bath, where it appears to be truly perennial, flowering about the end of June. Professor Martyn observes that it seldom lasts more than 2 years in a cultivated state. This may probably be for want of a fit soil or situation, as is the case likewise with Saintfoin, a truly perennial plant on its native chalky downs.

Root tapering, branched, but not creeping. Stems ascending, about a foot high, slightly branched, downy in the upper part, leafy. Leaflets elliptical, more or less acute, entire, smoothish, with a pale lunate spot. The uppermost leaves are mostly opposite. Stipulas awned, ovate, broadish, united, pale with purple ribs interbranching near the edge. Spikes terminal, solitary, sessile, ovate, dense, of many fragrant, light purple, flowers, whose petals are united at the base, and even combined with the filaments. Calyx hairy, with 10 ribs, 4 equal teeth, and 1, the lowermost, longer than the rest.

The value of this plant as an *artificial grass* is well known to agriculturists, especially in Norfolk.

1770



July 1867. Published by J. & S. Sowerby, London.





TRIFOLIUM medium.
Zigzag Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or less capitate. *Pods* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. *Spikes* lax. *Petals* nearly equal. *Stipulæ* awl-shaped and conniving together. *Stems* zigzag and branching. *Afzelius*.

SYN. *Trifolium medium*. *Linn. Faun. Suec. ed. 2. p. 558. Hudf. Fl. An. ed. 1. 284. Afzelius. Tr. of Linn. Soc. v. 1. 237.*

T. flexuosum. *Jacq. Fl. Austr. v. 4. tab. 386. With. Bot. Arr. 795.*

T. alpestre. *Hudf. Fl. An. ed. 2. 326.*

T. purpureum majus, *foliis longioribus et angustioribus, floribus saturationibus. Raii Syn. 328.*

AFTER the most elaborate and accurate dissertation of Mr. Afzelius above quoted, it would be vain to attempt any new observation upon this Trefoil, or the two other species which he has illustrated. This is found in dry elevated pastures, preferring a chalky soil, or a gravelly one with a clay bottom, and differs from *T. alpestre* (which is not a British plant) in having larger and more lax heads of flowers, broader and shorter leaves, a branched stem, stipulæ approaching each other, and ribbed; from *T. pratense*, Common Clover, it differs in its lax heads of flowers, longer and narrower stipulæ, and more unequal calyx: from both it is distinguished by its remarkably zigzag stem. The root is perennial, and the flowers appear in July.

This species is said not to be eligible for cultivation, as it does not thrive in a good loose soil; but Prof. Martyn justly remarks, (*Flora Rustica*, No. 5.) that it may therefore succeed on stubborn hungry clay, like its native places of growth.

190



Handwritten text, possibly a date or signature: "L'année du 1794"





TRIFOLIUM maritimum.

Teasel-headed Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. Spikes hairy, globose. Stipulæ lanceolate, erect. Calyx-teeth spreading, and dilated after flowering. Leaflets obovato-lanceolate, the lowermost obcordate; upper leaves opposite.

SYN. *Trifolium maritimum.* Hudf. *Fl. An. ed. 1.* 284.

T. stellatum. Hudf. *Fl. An. ed. 2.* 326. *With. Bot. Arr.* 799.

T. stellatum glabrum. Raii *Syn.* 329. *Ger. em.* 1208. *Pluk. Phyt. t.* 113. *f.* 4.

THE above are the only certain synonyms we can find for this Trefoil. Mr. Hudson rightly published it as new in his first edition, and sent it to Linnæus, who has preserved it in his Herbarium, marked Hudson's *T. maritimum*, without referring it to any of his own, yet he neglected to insert it in his subsequent works. We are at a loss to guess why Mr. Hudson afterwards took this plant for *T. stellatum*, a very different species, as is evident from the figures erroneously quoted (except Plukenet's) in the *Bot. Arr.* which are the real *stellatum*.

T. maritimum grows in salt-marshes, and meadows near the sea in various parts of England, from Norfolk all along the south and west coast to Wales. Mr. Wigg has sent it from Yarmouth, and Sir Thomas Cullum from Weymouth. The former assures us the root is certainly annual, as Ray marks it. The stems are spreading and branched, erect only when many grow together, a little hairy, very various in height. Leaves alternate, except the uppermost pair; leaflets obovate, narrow, minutely notched at the tip, of a darkish green. Stipulæ very narrow. Spikes short, almost globose. Calyx-teeth sharp, a little unequal in the flower, and more so in the fruit, in which last state they become broad and spreading. Petals nearly equal in length, palish red. The original observer of this species seems to have been Dr. Johnson, the editor, if not always the emendator, of Gerarde's Herbal.





TRIFOLIUM stellatum.

*Starry-headed Trefoil.**DIADELPHIA Decandria.*

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. *Spikes* hairy, ovate. *Stipulæ* elliptical. *Calyx-teeth* spreading, leafy, equal, taper-pointed. *Stems* spreading. *Leaflets* inversely heart-shaped, toothed.

SYN. *Trifolium stellatum.* *Linn. Sp. Pl.* 1083. *Willd. Sp. Pl. v. 3.* 1373. *Bauh. Prod.* 143. *Ger. em.* 1208.

T. stellatum purpureum monspessulanum. *Bauh. Hist. v. 2.* 376. *f. 2.* *Moris. sect. 2. t. 13. f. 9.*

Lagopus minor erectus, capite globoso stellato, floribus purpureis. *Barrel. Ic. t. 860.*

WE are happy to add the real *Trifolium stellatum* to the list of British plants. *T. maritimum* was long mistaken for it, see *t.* 220, nor did any botanist suspect we had both species till Mr. W. Borrer found the *stellatum*, on the 30th of July 1804, growing in great plenty between Shoreham harbour, Sussex, and the sea. The two plants are by far too different to be ever confounded again.

Root annual. Herb varying much in luxuriance, always considerably hairy. Stems spreading or diffuse, branched, clothed with soft horizontal hairs. Leaflets obcordate, somewhat wedge-shaped, abrupt, acutely toothed in the fore part, strongly ribbed. Flowers in round or ovate heads. Calyx very hairy, furrowed; its teeth long and very much pointed, all regular and equal, becoming leafy and enlarged after flowering. Its orifice is surrounded with an elegant red and white circle when about half grown. The standard of the corolla is red; the other petals pale red or white.

Gerarde describes this plant well, but gives no figure. He saw it in the garden of Tradescant, who obtained it from the Mediterranean.



TRIFOLIUM arvense.

*Hare's-foot Trefoil.**DIADELPHIA Decandria.*

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. Heads very hairy, cylindrical. Teeth of the calyx bristle-shaped, longer than the corolla. Leaflets narrow-obovate.

SYN. *Trifolium arvense.* *Linn. Sp. Pl.* 1083. *Sm. Fl. Brit.* 787. *Huds.* 326. *With.* 649. *Hull.* 163. *Relb.* 281. *Sibth.* 229. *Abbot.* 162. *Curt. Lond. fasc.* 6. *t.* 50. *Dicks. H. Sicc. fasc.* 3. 8.

T. arvense humile spicatum, seu Lagopus. *Raii Syn.* 330.

COMMON in sandy barren fields, flowering in July and August.

The root is small and annual. Stem mostly erect, very much branched, somewhat zigzag, round, hairy. Leaves on

Foot Galls, the leaflets nearly sessile, linear-obovate, hairy.



TRIFOLIUM scabrum.
Rough Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. Heads sessile, lateral, ovate. Calyx-teeth unequal, permanent, rigid, at length recurved.

SYN. Trifolium scabrum. *Linn. Sp. Pl.* 1084. *Sm. Fl. Brit.* 788. *Huds.* 327. *Witb.* 648. *Hull.* 163. *Relb.* 282. *Sibth.* 229. *Abbot.* 162. *Curt. Lond. fasc.* 6. t. 48.

T. flosculis albis, in glomerulis oblongis asperis, cauliculis proximè adnatis. *Raii Syn.* 329.

THIS species of Trefoil, more curious to the botanist than interesting to the farmer, is only occasionally found on chalky ground, or in dry sandy fields that lie over a calcareous soil, where it flowers in May or June, and then soon dries up and is blown about, scattering its seeds against the autumnal rains, when they produce young plants which blossom the following spring. Our specimens came from Kent. It is found also in Norfolk. Mr. Crowe gathered it on Snettisham beach, and in an old chalk-pit near Wells.

The root is small and annual. Stems several, prostrate, rigid, often a little zigzag, round, hairy. Leaflets obovate or obcordate, toothed, veiny, hairy. Stipulæ lanceolate. Heads axillary and terminal, solitary, sessile, ovate, hairy, composed of many thick-set, white, or pale bluish-coloured, flowers. Calyx hairy, with a pale furrowed base, and green sharp lanceolate teeth, erect at first, but soon spreading, and at length recurved, hard and rigid. Pod membranous, whitish, enclosed in the calyx. Seed yellowish.



Trifolium repens L. f. *repens* - *repens*

TRIFOLIUM glomeratum.

Round-headed Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. Heads hemispherical, sessile, lateral, smooth. Calyx-teeth heartshaped, reflexed, veiny.

SYN. *Trifolium glomeratum.* Linn. *Sp. Pl.* 1084.
Sm. Fl. Brit. 789. *Huds.* 327. *Willd.* 648.
Hull. 163. *Curt. Lond. fasc.* 4. t. 51.

T. cum glomerulis ad caulium nodos rotundis.
Raii Syn. 329.

THIS Trefoil, not being noticed in any of our provincial Floras, appears to be far from common; it grows, nevertheless, very abundantly on Blackheath and in other places about London, as well as in Suffolk and very near the walls of Norwich. Mr. Turner has gathered it at Yarmouth. It occurs only in gravelly pastures, flowering about midsummer.

Root annual, furnished with oval fleshy knobs. Whole plant destitute of pubescence. Stems quite prostrate, but little branched, various in length. Leaves remote; leaflets obovate, neatly toothed and striated, often marked with a transverse white or yellowish spot. Stipulæ membranous, ovate, pointed, divaricated, united at their base. Heads axillary, solitary, sessile, hemispherical, composed of many rose-coloured flowers. Calyx swelling, red-ribbed, with heartshaped, pointed, smooth, veiny teeth, which become at length reflexed and enlarged, sufficiently discriminating the species. The pod is small, round, and holds a single seed.



Asperula cynodactylus L.





78.
[1843]

TRIFOLIUM striatum.
Soft Knotted Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. Heads of flowers sessile, both lateral and terminal, ovate. Calyx elliptical, hairy, furrowed; with bristle-shaped teeth.

SYN. *Trifolium striatum.* Linn. *Sp. Pl.* 1085. Sm. *Fl. Brit.* 790. Huds. 327. With. 649. Hull. 163. Relh. 288. Sibth. 230. Abbot. 163.

T. parvum hirsutum, floribus parvis dilutè purpureis, in glomerulis mollioribus et oblongis, semine magno. *Raii Syn.* 329. t. 13. f. 3.

A NATIVE of dry barren and sandy pastures, flowering in June, and known from several species of Trefoil, which otherwise resemble it, by its downy softness to the touch.

Root annual, bearing small knotty swellings, such as we have often mentioned in other diadelphous plants. Stems procumbent, various in length and luxuriance, round, branched, often zigzag, downy. Leaflets obovate, or obcordate, finely toothed, downy. Stipulas ovate, broad, pointed, somewhat membranous between the ribs. Heads generally terminal, ovate. Calyx elliptical and swelling, hairy, with ten deep furrows, and five green, tapering, fringed teeth, lengthened out after flowering. Corolla of a pale rose-colour, about as long as the calyx. Pod membranous, with the rudiments of 2 seeds when young, one of which only is ripened, and becomes thrice as large as that of *T. glomeratum*, t. 1063.



Fig. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

TRIFOLIUM suffocatum.

*Suffocated Trefoil.**DIADELPHIA Decandria.*

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. Heads sessile, lateral, roundish, nearly smooth. Calyx-teeth lanceolate, acute, recurved, longer than the corolla.

SYN. *Trifolium suffocatum.* *Limn. Mant.* 2. 276.
Tr. of Limn. Soc. v. 2. 357. *Sm. Fl. Brit.* 790.
With. 656. *Hull.* 164. *Jacq. Hort. Vind.* 1. 60.

THIS, more truly a subterraneous plant than the species described in our preceding page, grows in the loose blowing sand of the sea shore, beneath which its stems and flowers are often entirely buried, the leaves only peeping above the surface. Hence perhaps it has been overlooked, as some common species not yet in flower. The accurate Mr. Wigg first detected it at Yarmouth. Our specimens were gathered at Landguard fort, Suffolk, by the late Mr. W. R. Notcutt, F. L. S. an ardent naturalist, who has since fallen a victim to the climate of Surinam, and whose loss, however great to science, is most irreparable to his friends.

This is an annual species, flowering in June and July. Root tapering, its fibres destitute, as far as we have observed, of tuberous swellings. Stems horizontal, short and zigzag, mostly under ground. Leaves on very long footstalks, smooth, their leaflets wedgeshaped and finely toothed. Stipulæ membranous, broad, with remarkably spreading points. Flowers in sessile axillary round heads. Body of the calyx a little hairy: teeth bent back, broad, acute, scarcely enlarged after the flowering. Corolla much shorter than the calyx-teeth, closed so as to protect the organs of fructification, which therefore perform their functions though buried in sand. The exclusion of light often renders the petals whitish; otherwise they are rose-coloured. Pod oblong, containing two yellowish seeds.

1049.



Desmodium illinoense Michx.

TRIFOLIUM fragiferum.
Strawberry-headed Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. Heads roundish. Calyx inflated, reflexed, with two prominent teeth. Stem creeping.

SYN. Trifolium fragiferum. *Lim. Sp. Pl.* 1086. *Sm. Fl. Brit.* 791. *Huds.* 328. *Witb.* 654. *Hull.* 164. *Relb.* 283. *Sibth.* 230. *Abbst.* 163. *Curt. Lond. fasc. 2. t. 55.* *Dickf. H. Sicc. fasc. 4. 11.* *Raii Syn.* 329.

NOT rare in moist pastures, or on wet heaths, especially in the black boggy soil of osier holts, and by river sides, flowering in July and August; but the herbage being very like the common *T. repens* may occasion it to pass frequently undistinguished. When, as the fruit ripens, the swelling calyces assume their strawberry-like appearance, no one can help being struck with their beauty and singularity.

Root perennial, tapering, beset with fleshy knobs. Stems prostrate, leafy, throwing out fibrous roots, and often creeping very far. Leaves on long stalks; leaflets obovate or obcordate, sharply toothed, ribbed, dark green. Stipulae lanceolate, large and acute. Flower-stalks much longer than the leaves, erect, strong. Heads small, roundish. Petals rose-coloured, far more slender and small than those of *T. repens*. Calyx downy, membranous, its 2 upper teeth much longer than the rest, and these remain prominent when the calyx becomes deflexed, greatly inflated in the upper side, veiny, and tinged with crimson. In that state it conceals within its base the small two-seeded pod.

This Trefoil is eaten by cattle, but is not recommended for culture, as its produce is late and not considerable.



TRIFOLIUM procumbens.

Hop Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. Heads oval, imbricated. Standard deflexed, permanent, furrowed. Stems procumbent. Leaflets obovate.

SYN. *Trifolium procumbens.* *Linn. Sp. Pl.* 1088. *Sm. Fl. Brit.* 792. *With.* 654. *Hull.* 164. *Sibth.* 230. *Abbot.* 163.

T. agrarium. *Huds.* 328. *Relb.* 283. *Curt. Lond. fasc.* 3. t. 45. *Mart. Rust.* t. 121.

T. pratense luteum, capitulo Lupuli, vel agrarium. *Raii Syn.* 330.

IN rather dry gravelly pastures, and the borders of fields, not uncommon, acceptable to cattle, flowering in June and July, and rendered conspicuous in a more advanced state by its dry permanent hop-like heads.

Root small, but strong, annual. Stems spreading widely, and naturally procumbent, though sometimes supported by





Ononis spinosa L. var. *spinosa* L.

[1256]

TRIFOLIUM minus.

*Lesser Yellow Trefoil.**DIADELPHIA Decandria.*

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. *Heads* hemispherical. *Flower-stalks* straight and rigid. *Standard* nearly smooth. *Stems* prostrate. *Common footstalk* shortest at the base.

SYN. *Trifolium minus.* *Relh.* 290.

T. filiforme β. *Sm. Fl. Brit.* 793. *With.* 655. *Hull.* 164.

T. procumbens. *Huds.* 328. *Curt. Lond. fasc.* 5. *t.* 53.

T. dubium. *Sibth.* 231. *Abbot.* 163.

T. lupulinum alterum minus. *Raii Syn.* 330. *t.* 14. *f.* 3.

ACCORDING to our promise in *v.* 14. *p.* 945, we now proceed to distinguish this plant from the real *T. filiforme*, to which we were first led by the accurate remarks of the Rev. Dr. Beeke, who has favoured us with specimens of both in various states. Indeed both are common in dry gravelly pastures, and flower throughout June and July.

T. minus has a small annual root, often furnished with little knobs, as in *Vicia lathyroides* and other diadelphous plants. Stems, when not supported, procumbent, round, somewhat hairy, but little branched, from 6 to 24 inches long; in the larger variety *fig.* 1, succulent and brittle, which is not the case in *fig.* 2; notwithstanding which Dr. Beeke agrees with us to consider them as merely varieties. Leaves on a very short general footstalk, the central leaflet elevated on a much more considerable partial stalk than in *T. procumbens*, *t.* 945, or in *T. filiforme*; which circumstance well characterizes the species before us. The leaflets of all the 3 species are obovate, emarginate and toothed; the stipulæ half-ovate. The flowers of both varieties of *T. minus* are from 12 to 15 on a straight stiff stalk. Flowers yellow; their standard not broad nor very perceptibly furrowed. Calyx-teeth extremely unequal, taper, hairy. Seed 1, rarely 2, in each pod.

Dr. Beeke has observed cows and sheep to be very fond of the luxuriant variety *f.* 1, and esteems it likely to be a most valuable plant for cultivation in upland pastures.



Stem, pedicel & leaflets

Do.

TRIFOLIUM filiforme.

Slender Yellow Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Flowers* more or less capitate. *Pod* scarcely longer than the calyx, never bursting, but falling off entire.

SPEC. CHAR. *Heads* lax, of few flowers. *Flower-stalks* waved. *Standard* smooth. *Stems* prostrate. *Leaflets* all nearly sessile.

SYN. *Trifolium filiforme.* Linn. *Sp. Pl.* 1088. Sm. *Fl. Brit.* 792. Huds. 329. With. 655. Hull. 164. Relh. 290. Sibth. 231. Abbot. 164.

T. lupulinum minimum. Dill. in *Raii Syn.* 331. t. 14. f. 4.

TRIFOLIUM filiforme is common in gravelly pastures in various parts of England, often growing indiscriminately with the species in our last plate, and flowering at the same season.

The root is annual. The size of the plant often exceeds the smaller variety of *T. minus*, but, in Norfolk at least, it is generally smaller; like that, it is procumbent and very slender. Every part in general is smooth and without hairs, except a slight pubescence on the flower-stalks, and sometimes on the upper part of the stem. All the leaflets sessile, on a short common footstalk. Flowers on very slender, waved, seldom straight, stalks, from 3 to 8, on capillary partial stalks, longer in proportion than in the foregoing, and leaning one way. Pods but slightly recurved, laxly spreading, scarcely covered by the dried corolla, which in that state is of a whitish colour. When fresh the flowers are yellow. The standard is smooth, not furrowed. The calyx-teeth quite smooth, and less remarkably disproportioned than in *T. minus*.



LOTUS corniculatus.
Common Bird's-foot Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Legume* cylindrical, straight. *Wings* of the *corolla* cohering by their upper edge. *Calyx* tubular. *Filaments* dilated upwards.

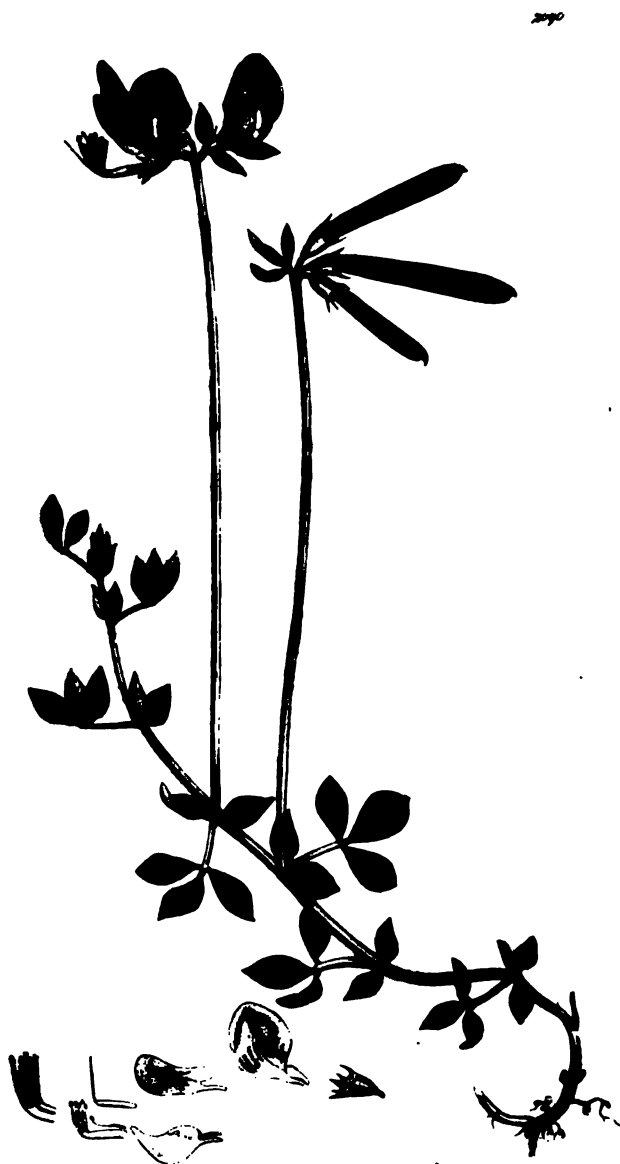
SPEC. CHAR. Heads depressed, of few flowers. Stems decumbent, solid. Legumes spreading, nearly cylindrical. Claw of the keel obovate. Filaments all dilated.

SYN. *Lotus corniculatus*. *Linn. Sp. Pl.* 1092. *Sm. Fl. Brit.* 793. *Huds.* 329. *With.* 656. *Hull.* 166. *ed.* 2. 218. *Relh.* 291. *Sibth.* 231. *Abbot.* 164. *Curt. Lond. fasc.* 2. t. 56. *Mart. Rust.* t. 53. *Fl. Dan.* t. 991. *Dicks. H. Sicc. fasc.* 17. 7. *L. corniculata glabra minor. Raii Syn.* 334.

VERY common in open grassy pastures, flowering from June to the end of August or September.

Root perennial, woody, long, much branched at the summit. Stems numerous, spreading on the ground in every direction, solid, simple or branched, various in length, leafy, angular, clothed with close-pressed hairs, as are also the leaves, which are alternate, ternate, with a pair of leafy stipulas at the base of their common stalk. The leaflets are obovate, acute, entire, glaucous beneath; the lateral ones oblique. Flower-stalks axillary, solitary, 5 times as long as the leaves, angular, each bearing a head of about 3, or from 2 to 5, spreading flowers, of a fine yellow, turning orange as they fade. The keel is striped with red at the base, and its claw remarkably dilated and rounded upwards, as Mr. W. Borrer first observed to us. The filaments are all dilated below the anther. Spaces between the calyx-teeth rounded. Legume not exactly cylindrical, but, as it ripens, depressed and somewhat channelled above, smooth, of a shining purple brown.

That excellent agriculturist and worthiest of men the late Dr. Anderson, recommended this plant, by the name of Milk-vetch, for cultivation, as producing a great quantity of fodder, and making excellent hay. It seems not to have come into use.



Leaves published by J. Kewey-Lewis



LOTUS major.
Greater Bird's-foot Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Legume* cylindrical, straight. *Wings* of the *corolla* cohering by their upper edge. *Calyx* tubular. *Filaments* dilated upwards.

SPEC. CHAR. Heads depressed, many-flowered. Stems erect, hollow. Legumes spreading, cylindrical. Claw of the keel linear. Shorter filaments not dilated.

SYN. *Lotus major*. *Scop. Carn. v. 2. 86.*

L. corniculatus γ and δ . *Sm. Fl. Brit. 794.*

L. corniculata major species. *Raii Syn. 334. Bauh. Hist. v. 2. 355,*

L. pentaphyllus medius pilosus. Dill. in Raii Syn. 334.

THIS, which Scopoli long ago distinguished as a species, we are induced, by many recent observations, to admit as such. It is common among bushes on a wet spongy soil, in osier-grounds and moist hedges. The stems are from one to two or three feet high, upright, hollow, more or less clothed with long loosely-spreading hairs. Leaves also fringed with similar hairs. Flowers from 6 to 12 in each head, of a duller orange than the former. Calyx-teeth stellated when young, hairy; the spaces between them, as the Rev. Dr. Becke observes, are narrow and acute, not rounded. Claw of the keel almost linear, by no means rounded or expanded. Shorter filaments not dilated under the anther like the longer ones, a character pointed out by Scopoli. Pod slender, and exactly cylindrical. All these differences are surely sufficient, and indeed the plant is, at first sight, so different from the common *L. corniculatus*, that nothing can be more readily recognized.





[925]

LOTUS diffusus.
Slender Bird's-foot Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Pod* cylindrical, straight. *Wings* of the corolla cohering by their upper edge. *Calyx* tubular.

SPEC. CHAR. Flower-stalks mostly single-flowered. Stem much branched, prostrate. Leaves and calyx hairy. Pods round, linear, and very slender.

SYN. *Lotus diffusus*. *Sm. Fl. Brit.* 794.

Trifolium corniculatum minus, pilosum. *Baub. Prod.* 144.

MR. DICKSON first observed this new species of *Lotus* on the rocky beach at Hastings, from whence it was brought us by Mr. E. Forster. Mr. Turner and Mr. Sowerby remarked it growing plentifully in a meadow near St. Vincent's rocks, Bristol. Linnæus confounded it with his *L. angustissimus*, which is a larger plant, with smooth leaves, and shorter, much thicker, pods.

The plant before us has a long, apparently perennial, root, furnished with tubercles as in *Vicia lathyroides*. Stems procumbent, branched, very leafy, hairy. Leaflets and stipulæ all of the same shape, ovate, pointed, rather glaucous, hairy on both sides. Flower-stalks axillary, bearing one flower (rarely two), accompanied by 3 sessile leaflets. Calyx slender-funnel-shaped, very hairy, reddish. Petals full yellow, not orange-coloured. Pod when ripe above an inch long, straight, very slender, cylindrical, or but little compressed, pointed, brown, smooth and shining, cellular within, containing many small globular seeds.

The first flowers appear in May and June, and are followed by a long succession of others. Their small size, and nearly solitary mode of growth, readily distinguish this species from the common one. The specific name was given by Dr. Solander, who described specimens gathered in Madeira.



Sept 1844. Collected by Dr. George Engelmann.

MEDICAGO sativa.

*Purple Medick, or Lucerne.**DIADELPHIA Decandria.*

GEN. CHAR. *Pod* compressed, spiral, forcing back the keel of the corolla from the standard.

SPEC. CHAR. Flower-stalks racemose. Pods spirally twisted. Stem erect, smooth.

SYN. *Medicago sativa*. *Linn. Sp. Pl.* 1096. *Sm. Fl. Brit.* 795. *Huds.* 330. *With.* 658. *Hull.* 165. *Abbot.* 164. *Mart. Rust.* t. 48.

Trifolium Burgundiacum. *Ger. em.* 1189.

THE Cultivated Lucerne is well known as a fodder for cattle, though rather of recent introduction. It is said to have been brought from the more eastern countries into Greece, and has for ages been in general cultivation in the south of Europe. A complete history of the subject is given in Professor Martyn's *Flora Rustica*.

This plant seems to have but little right to a place in our *Flora*, being only a naturalized species, and seldom lasting long in a place. The Rev. Mr. Leathes sent it from Cringleford near Norwich, where he observed it abundantly in hedges, as wild as it ever occurs with us, flowering in July and August.

Root perennial, woody, preferring a calcareous dry soil. Stems nearly erect, about 2 feet high, branched, leafy, roundish, smooth. Leaves alternate, stalked, ternate, oblong inclining to wedge-shaped, acute, serrated in the fore part, smooth above, hairy beneath. Stipulæ acute, sometimes toothed. Clusters axillary, on stalks, erect, many-flowered, with a bristle-like bractea at the base of each partial stalk. Corolla purple, streaked with white and green. Pod spiral, making 2 or 3 turns, rarely more, and containing several seeds. The more spiral pod chiefly distinguishes the plant from *M. falcata*, t. 1016, which after all may be the true wild state of *M. sativa*. Neither culture, however, on the one hand, nor neglect on the other, has hitherto brought them together, so far as we have been able to inquire.



[1016]

MEDICAGO falcata.

Yellow Medick.

DIADELPHIA Decandria.

GEN. CHAR. *Pod* compressed, spiral, forcing back the keel of the corolla from the standard.

SPEC. CHAR. Flower-stalks racemose. Pods fickle-shaped. Stem procumbent.

SYN. *Medicago falcata*. *Linn. Sp. Pl.* 1096. *Sm. Fl. Brit.* 796. *Huds.* 330. *Willd.* 658. *Hull.* 165. *Relb.* 285. *Mart. Fl. Rus.* t. 86 & 87.

Medica sylvestris. *Raii Syn.* 333.

THIS plant is confined to a gravelly or chalky soil, and is no where so abundant as about Norwich, in the borders of gravelly fields and on the city walls in many places. Mr. Relhan mentions several stations for it in Cambridgeshire, but we have rarely seen it elsewhere. It is perennial, and flowers very copiously in July.

Root long, woody. Stems numerous, procumbent, widely spreading, round, hairy, leafy, branched. Leaves ternate; leaflets narrow-obovate, serrated towards the point. Stipulæ acute, joined to the foot-stalk. Flowers many together on a common stalk, and each on a partial slender one, bracteated at the base. Corolla generally pale yellow, but occasionally violet, and often green, as it were from a combination of these 2 colours. Pods black, downy, fickle-shaped, not twisted into a screw as in *M. sativa*, to which this species is otherwise greatly allied. Seeds from 4 to 8.

The germen when young is held in a straight position by the petals of the keel, but soon liberates itself with a spring, which serves to dash the pollen about the stigma. See *Sm. Tracts*, 173. This species, like the *sativa*, affords good food for cattle, but the position of its stems is less commodious for their feeding or for mowing.

1016.



Desmodium illinoense (Michx.) Benth.



MEDICAGO lupulina.

*Black Medick, or Nonesuch.**DIADELPHIA Decandria.*

GEN. CHAR. *Pod* compressed, spiral, forcing the keel of the corolla from the standard.

SPEC. CHAR. Spikes ovate. Pods kidney-shaped, veiny, rugged, single-seeded. Stem procumbent.

SYN. *Medicago lupulina*. *Linn. Sp. Pl.* 1097. *Sm. Fl. Brit.* 797. *Huds.* 330. *With.* 659. *Hull.* 165. *Relb.* 286. *Sibth.* 232. *Abbot.* 165. *Curt. Lond. fasc.* 2. t. 57. *Mart. Rust.* t. 19.

Trifolium luteum lupulinum. *Raii Syn.* 331.

IF in the preceding page we have described a noxious weed, the plant now under consideration has far different claims to notice, being one of the most valuable among the *artificial grasses*; a term given by agriculturists to such plants as are sown for a crop instead of the spontaneous herbage; and the Norfolk farmers have distinguished this by the name of *Nonesuch*. It is esteemed excellent fodder for sheep; and is often sown with *Lolium perenne* for a crop of hay. In a wild state it frequently occurs, both in pastures and fields, flowering from May to August.

The root is annual, tapering, branched. Stems several, spreading widely on the ground, angular, leafy. Leaves like those of a Trefoil, the leaflets obovate or rhomboid, finely toothed at the anterior edge, veiny. Stipulæ toothed. Spikes ovate, many-flowered, on long stalks. Flowers small, bright yellow. Pods kidney-shaped, with the traces of a spiral structure, very black, rugged and veiny, sometimes hairy, each containing a single compressed yellowish seed. By these pods, and even by their spiral rudiments in the flower, it is known from every plant with which it could otherwise be confounded.





[1616]

MEDICAGO polymorpha.

*Heart Medick, or Claver.**DIADELPHIA Decandria.*

GEN. CHAR. *Pod* compressed, spiral, forcing back the keel of the corolla from the standard.

SPEC. CHAR. Pods coiled up like a snail. Stipulas somewhat toothed. Stem spreading on the ground.

SYN. *Medicago polymorpha*. Linn. *Sp. Pl.* 1098, η . Sm. *Fl. Brit.* 797. Huds. 331. Relh. 292. Curt. *Lond. fasc.* 3. t. 47. Mart. *Rust.* t. 76.

M. arabica. With. 660. Sym. 167. Hull. 165.

M. maculata. Sibth. 232.

Trifolium cochleatum, folio cordato maculato. Raii *Syn.* 333. n. 1: also n. 2, 3 and 5, following.

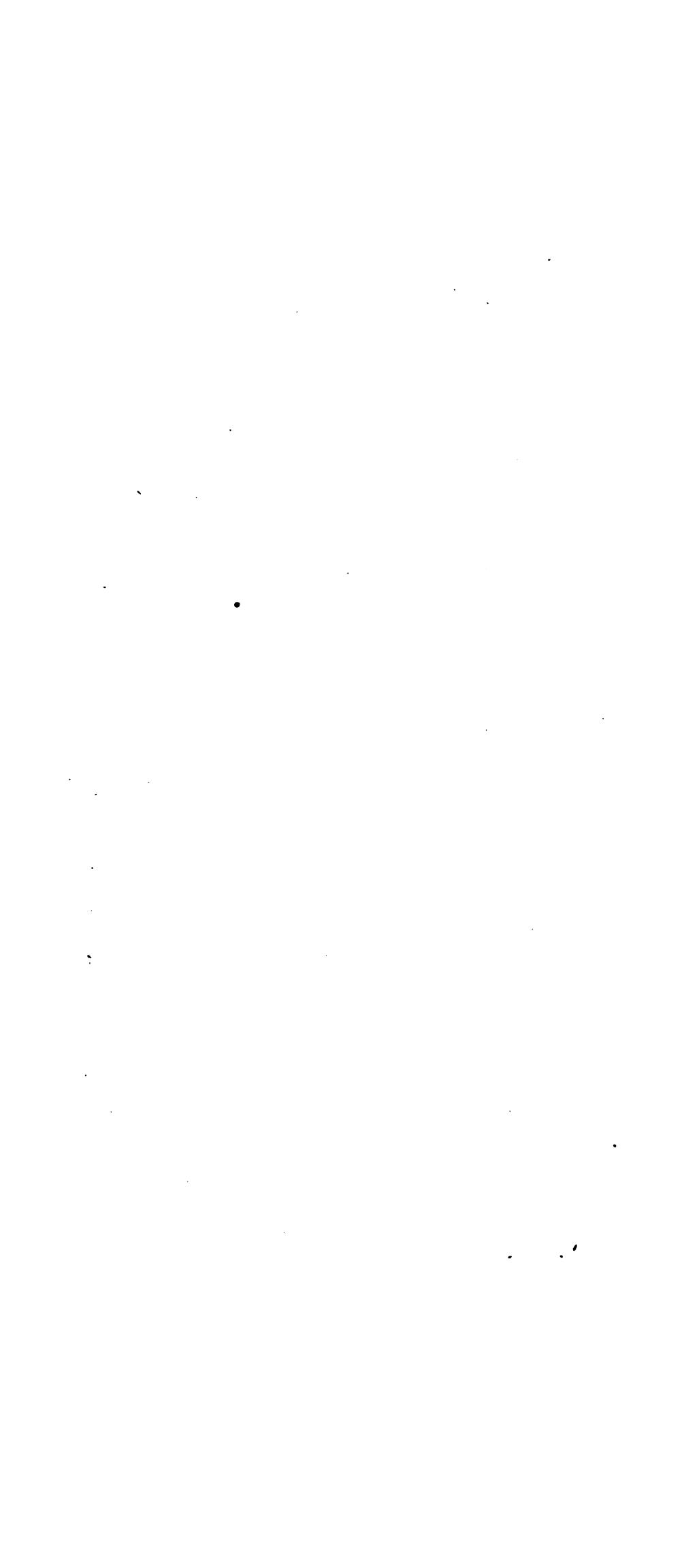
SENT by the Rev. Mr. Hemsted from near Bedford. It occurs in several of the southern parts of England, on a gravelly soil, flowering in May and June. We have gathered it plentifully under the wall of Richmond gardens next the river. The Rev. Dr. Beeke finds it abundant in many maritime parishes of Devonshire.

The root is annual, furnished with little fleshy knobs as in *Vicia lathyroides*, and others of the same family. Stems prostrate, branched and spreading, angular. Stipulas more or less deeply cut. Leaflets inversely heartshaped, ribbed, sharply toothed. Flowerstalks axillary, solitary, slender, hairy, each bearing commonly 3 yellow flowers. The germen becomes spiral after impregnation, and is coiled up into a ball, like a snail's shell, the outer edge of each circumvolution being beset with little prominent teeth.

In this variety, which is the most common, the leaflets are each marked with a black spot: in some others they are more silky, and the spines on the fruit also vary in form. Experiments are requisite to prove whether these supposed varieties are distinct species or not.







HYPERICUM calycinum.

Large-flowered St. John's-wort.

POLYADELPHIA Polyandria.

GEN. CHAR. *Cal.* deeply 5-cleft, inferior. *Pet.* 5. *Filaments* numerous, united at the base into 3 or 5 sets. *Caps.* with many seeds.

SPEC. CHAR. Styles five. Flowers solitary. Stem shrubby, branched, quadrangular. Segments of the calyx obovate, obtuse. Leaves oblong.

SYN. *Hypericum calycinum.* *Linn. Mant.* 106. *Ait. Hort. Kew.* v. 3. 103. *Curt. Mag. t.* 146; excluding Bauhin's synonym.

WE add to our Flora another *Hypericum* without the least scruple. This species, erroneously suspected by Linnæus to be of American origin, is known by the authority of Sir George Wheler and of Professor Sibthorp to grow in woods about the village of Belgrad, near Constantinople. Our specimen was gathered by Mr. Drummond, curator of the new botanic garden of Cork, and sent us by Mr. Hincks, secretary to the Cork Institution. The plant grows in great abundance 3 miles from Cork in the way to Bandon, in those gentlemen's opinion, perfectly wild, nor, when we consider the climate and exposure, and how little Ireland has been scientifically examined, can we doubt it. We had hoped that Bauhin's Pyrenæan *Ascyrum magno flore*, *Prod.* 130, might prove the same; but a manuscript note of Linnæus, made on examining Burser's herbarium, asserts that to be his *H. Ascyron*, and not *calycinum*. Morison has figured our plant, *sect.* 5. *t.* 35. *f.* 2, but his description is a miserable mass of error.

This very handsome plant is a great and frequent ornament to shrubberies, growing under trees, and flowering all summer long. The roots creep. The stems are shrubby; branches simple, leafy, square, each terminated by a flower larger than in any other *Hypericum*, of a rich golden yellow, with 5, rarely 4, styles. The petals are often lobed. The leaves are sessile, elliptic-oblong, obtuse, entire, punctate, paler beneath. No plant is so difficult as this to fasten, by any known cement, to paper when dried.



1

2

3

4



[1225]

HYPERICUM Androsæmum.

*Tutsan, or Park Leaves.**POLYADELPHIA Polyandria.*

GEN. CHAR. *Cal.* deeply 5-cleft, inferior. *Pet.* 5. *Filaments* numerous, united at the base into 3 or 5 sets. *Caps.* with many seeds.

SPEC. CHAR. Styles three. Capsule pulpy. Stem shrubby, compressed.

SYN. *Hypericum Androsæmum.* *Linn. Sp. Pl.* 1102. *Sm. Fl. Brit.* 800. *Huds.* 332. *With.* 663. *Hull.* 167. *Sibth.* 233. *Curt. Lond. fasc.* 3. t. 48. *Lightf.* 415.

H. maximum, Androsæmum vulgare dictum. *Raii Syn.* 343.

OUR largest wild species of *Hypericum*, the *Androsæmum*, is also one of the rarest, and seems to be more frequent in Norfolk than in other counties. About North Walsham, Wood Dalling, Costesy, and some other places, it is found growing plentifully in shady lanes, thickets and woods, flowering in July, and fruiting in the autumn. The Rev. Mr. Butt found it not uncommon in woods in Ireland.

The stem is woody and perennial, erect, repeatedly branched, leafy, quadrangular, but more or less compressed. Leaves opposite, sessile, widely spreading, ovate, or rather heart-shaped, entire, veiny, somewhat rigid, especially when old, smooth, as well as every other part of the plant. Panicles terminal, sessile, more or less accurately three-forked; their stalks quadrangular in the lower part, but above the bractæ, which are small opposite and acute, they have 5 angles. All the angles are sharp and almost winged. Calyx of 5 ovate entire leaves, 2 of them smaller than the rest, all permanent, becoming larger, firmer, more spreading, and coloured, as the fruit advances toward maturity. Petals and stamina yellow. Styles 3, of the same colour, changing afterwards to purple. Fruit purplish black, elliptical, consisting of a pulpy capsule.

No glands adorn the flowers of this species. It is easily known by its shrubby stem, large flowers, and black fruit. When rubbed it has an aromatic scent. Curtis has well remarked that "neither Haller, Linnæus, Jacquin, Scopoli, nor Oeder enumerate it in their respective Floras."



Oct. 2. 1800. Published for J. G. Sowerby, London.



HYPERICUM quadrangulum.

*Square St. John's Wort.**POLYADELPHIA Polyandria.*

GEN. CHAR. *Cal.* 5-cleft. *Petals* 5. *Filaments* numerous, united at the base into 3 or 5 sets. *Caps.* roundish.

SPEC. CHAR. *Styles* three. *Stem* four-edged, herbaceous. *Leaves* sprinkled with pellucid dots. *Calyx-leaves* lanceolate.

SYN. *Hypericum quadrangulum.* *Linn. Sp. Pl.* 1104. *Huds. Fl. An.* 334. *Relh. Cant.* 289. *Curt. Lond. fasc.* 4. t. 52.

H. quadrangulare. *Linn. Syst. Veg. ed.* 14. 701. *With. Bot. Arr.* 813. *Sibth. Ox.* 235.

H. Ascyron dictum caule quadrangulo. *Raii Syn.* 344.

COMMON in moist hedges, meadows, and banks of rivers, flowering in July and August.

Root woody, perennial, creeping. Stems several, perfectly erect, two feet high, leafy, very acutely quadrangular throughout, by which, and the smallness of the flowers, this species is readily distinguished from *H. perforatum*, t. 295. Leaves opposite, each pair crossing those next to them, elliptical or ovate, rather paler beneath, copiously dotted, bluntish, entire, but sometimes a little crisped in the margin, ribbed. The stem terminates in a paniced manner, with opposite many-flowered branches. Calyx-leaves lanceolate, narrow. Petals oblique, pale-yellow. We have not observed them so frequently dotted and streaked with dark purple as in the *H. perforatum*, though they sometimes are so. Antheræ with a dark purple gland.

Linnaeus appears by his herbarium to have confounded with this plant our *H. dubium*, t. 296, which we did not observe till now. That species however, though subject to be occasionally dotted in its leaves in a slight degree, still remains distinct from this and the common *perforatum* by its elliptical calyx-leaves, which never vary. We cannot here refrain from doing justice to the physiological judgment of our worthy friend Mr. Correa, who, when the *dubium* was first discovered, cautioned us against founding an absolute specific character upon the want of these pellucid dots.



Hypericum perforatum L.

HYPERICUM perforatum.

Perforated St. John's Wort.

POLYADELPHIA Polyandria.

CHAR. Cal. 5-cleft. Petals 5. Filaments numerous, united at the base into 3 or 5 sets. Cap.

SPEC

Stem two-edged. Leaves
pellucid dots. Calyx-leaves

Linn. Sp. Pl. 1105.
Th. Bot. Arr. 813. Relh.
34. Curt. Lond. fasc. 1.
t. 29. t. 10.

peric

AN extremely common plant in groves, thickets, and under hedges, flowering about July and August.

Its woody creeping perennial roots make it very difficult to be extirpated. They throw up numerous stems, about two feet high, perfectly erect, leafy, roundish, but marked with two prominent lines running down from the insertion of every pair of leaves, which render the stem two-edged. Leaves opposite, each pair crossing those below them, oblong, somewhat elliptical, bluntish, entire, with one main rib and several straight veins springing from it, paler and somewhat glaucous beneath, sprinkled with numerous green pellucid dots, easily seen when held against the light, and marked besides with a few dark purple opaque dots, especially on the margin. A short simple leafy branch arises from the bosom of each leaf, the upper ones bearing flowers, and forming a forked leafy panicle terminating the stem. The flowers are bright yellow, and not inelegant. Calyx-leaves lanceolate, pointed, entire. Petals entire at one edge, crenate at the other. Antheræ tipped with a dark purple gland. Stigmas whitish in our specimens, though by some writers described as crimson. The edges of the calyx and petals, as well as their external surface, are marked with dark purple spots and lines, containing a red essential oil soluble in spirits, but the aromatic qualities of the herb appear not to be confined to these spots.



Primula vulgaris L.



HYPERICUM dubium.

*Imperforate St. John's Wort.**POLYADELPHIA Polyandria.*

GEN. CHAR. *Cal.* 5-cleft. *Petals* 5. *Filaments* numerous, united at the base into 3 or 5 sets. *Capsule* roundish.

SPEC. CHAR. *Styles* three. *Stem* obsoletely four-edged. *Leaves* obtuse, destitute of pellucid dots. *Calyx-leaves* elliptical.

SYN. *Hypericum dubium.* *Leers Fl. Herborn.* 165.

THAT this is a most distinct species of *Hypericum* from the *perforatum*, and all others there can be no doubt, though it seems to have escaped the notice of every author except the accurate Leers, not being mentioned even as a variety by any other that we can find. Neither is it, as Leers was induced to suspect, the *H. perfoliatum* of Linnæus. This addition to our catalogue of British natives was discovered in July 1794 by Dr. John Seward of Worcester, growing plentifully about Sapey in that county, and was ascertained by the Rev. Mr. Douglas to be the *H. dubium* of Leers. Dr. Smith has received it from Switzerland, by favour of Mr. Davall, under the same denomination, and found it himself very abundantly last August about Colonel Johnes's delightful and romantic place at Hafod, Cardiganshire, as well as in Mr. Knight's fine woods at Downton Castle near Ludlow, where it is much more common than the *perforatum*. It may perhaps be found in other parts of our island when accurately sought for.

In habit, size, and colour, this plant very nearly agrees with the *perforatum*, but differs essentially from that species in having no pellucid dots apparent on the leaves, and in the calyx-leaves being elliptical and obtuse. The latter indeed, and even the bractæ, are sprinkled with pellucid dots and lines, and the petals, as well as the edges of the leaves, marked with opaque purple, as in that; but in addition to the above differences, the stem of *H. dubium* is in the upper part almost quadrangular; and it may even be known before it comes out of the ground, by the much more vivid red of the young shoots.



Hypericum perforatum L.

HYPERICUM humifusum.

Trailing St. John's Wort.

DIAGNOSTIC Characters.

Stem. Herb. Cal. sessile 3-4-5 inferior. Pet. 5.
Franchet sometimes united at the base into 3 or 5
 sepals. Leaves with many veins.

Flower. Herb. Leaves linear. Flowers somewhat cymose.
Stem sometimes prostrate. Leaves elliptical,
 sessile.

Stem. *Hypericum humifusum.* *Lin. Sp. Pl.* 1105. *Sm.*
P. Juss. Syst. Franch. Syst. W. 665. Hall. 167.
Hook. Bot. Beech. 205. Ait. 165. Carr. Lond.
Flora 3. 32.

Fr. name. *Hypericum.* *Willd. Sp. 343.*

REMARKS. It grows in moist pastures and on boggy
 marshes, flowering from June to August.

Root. Vertical. Bark. Cortex smooth. Stems several,
 sometimes branched, rarely arising in length, slightly com-
 pressed, more or less branched. Leaves sessile, opposite, el-

leaves with several of a thin membranous texture, and of



HYPERICUM humifusum.

Trailing St. John's Wort.

POLYADELPHIA Polyandria.

GEN. CHAR. *Cal.* deeply 5-cleft, inferior. *Pet.* 5. *Filaments* numerous, united at the base into 3 or 5 sets. *Caps.* with many seeds.

SPEC. CHAR. *Styles* three. *Flowers* somewhat cymose. *Stem* compressed, prostrate. *Leaves* elliptical, smooth.

SYN. *Hypericum humifusum.* *Linn. Sp. Pl.* 1105. *Sm. Fl. Brit.* 803. *Huds.* 332. *With.* 665. *Hull.* 167. *Relh.* 295. *Sibth.* 233. *Abbot.* 165. *Curt. Lond. fasc.* 3. t. 50.

H. minus supinum. *Raii Syn.* 343.

FREQUENT in gravelly or sandy pastures and on boggy heaths, flowering from June to August.

Root perennial, fibrous. Herbage smooth. Stems several, prostrate, slender, leafy, varying in length, slightly compressed, more or less branched. Leaves sessile, opposite, elliptical, entire, dotted, of a thin membranous texture, and of a palish green, especially beneath. Flowers on short simple stalks from the upper part of the stem, generally forming a sort of forked corymbus. Their colour is a bright uniform yellow. The segments of the calyx are broad and leafy, their edges toothed with purple glands, as are also the margins of the petals. Stamina, styles and germen yellow. The fruit turns red as it ripens, and the lower leaves assume the same hue.

In a certain lemon-like scent, as well as its general colouring, this plant agrees most with *H. dubium* and *perforatum*; but its procumbent mode of growth, few flowers, and more leafy calyx, serve easily to distinguish it.



Oct 1 1863 Published by T. & A. Sowerby, London.



HYPERICUM montanum.

*Mountain St. John's Wort.**POLYADELPHIA Polyandria.*

GEN. CHAR. *Cal.* 5-cleft. *Petals* 5. *Filaments* numerous, united at the base into 3 or 5 sets. *Caps.* roundish.

SPEC. CHAR. Styles three. Calyx with glandular serratures. Stem erect, round, smooth. Leaves ovate, naked.

SYN. *Hypericum montanum.* *Linn. Sp. Pl.* 1105. *Huds. Fl. An.* 333. *With. Bot. Arr.* 815. *Sibth. Ox.* 235.

H. elegantissimum non ramosum, folio lato. Raii Syn. 343.

FROM Charlton wood. This species, justly denominated elegant by the old writers, is found in various parts of England upon gravel or chalk, as between Norwich and Thorpe, upon wild shrubby hills. It flowers in July.

The root is perennial, producing several stems, which rise to the height of 2 feet or more, and are simple, round, smooth and leafy, most naked in the upper part. Leaves opposite, sessile, ovate, ribbed, smooth on both sides, entire, their margin dotted with purple beneath. Panicle terminal, upright, of several elongated forked branches, quite destitute of leaves, by which last mark (besides its smoothness) it is distinguished from *H. hirsutum*, but furnished with a few small opposite lanceolate bractæ, fringed with a row of brown glands on little foot-stalks. The calyx-leaves, which are lanceolate, are fringed in the same manner, and give the flowers a resemblance to the moss-rose. Petals lemon-coloured, elliptical, a little oblique, entire.





[1986]

HYPERICUM *barbatum*.*Bearded St. John's Wort.**POLYADELPHIA Polyandria.*

GEN. CHAR. *Cal.* deeply 5-cleft, inferior. *Pet.* 5. *Filaments* numerous, united at the base into 3 or 5 sets. *Caps.* with many seeds.

SPEC. CHAR. Styles three. Calyx and petals fringed and dotted. Leaves ovate, dotted. Stem erect, slightly angular.

SYN. *Hypericum barbatum.* *Jacq. Austr. v. 3. 33. t. 259.* *Linn. Hyper. in Am. Acad. v. 8. 323.* *Willd. Sp. Pl. v. 3. 1462.*

SCARCELY any botanical discovery with which, through the kindness of our friends, we have been enabled to enrich our work, has given us more pleasure than this beautiful *Hypericum*, found by Mr. G. Don, "by the side of a hedge near the wood of Aberdalgy in Strath Earn; Perthshire, but sparingly, flowering in the end of September or October." Some of his specimens have reached us in a sufficiently fresh state to be drawn in the annexed plate. We know not that this plant has been much noticed by authors, but we have specimens from Switzerland and Italy, as well as Austrian ones from Jacquin.

The root is perennial. Stems a foot or more in height, leafy, erect, straight, scarcely branched except at the top; round and purplish at the bottom; rather angular upwards. Leaves sessile, opposite, ovate, bluntish, entire, slightly revolute, smooth, veiny, sprinkled on both sides with dark-purplish glandular dots. Flowers yellow, in a terminal leafy upright forked panicle, with lanceolate bractes and calyx-leaves, both which are strongly and copiously fringed, in the most elegant manner, with long pale glandular hairs. Petals obovate, minutely fringed or toothed, dotted like the leaves, as well as the calyx and bractes. Stamens in 3 sets. Anthers orbicular. Styles 3. Jacquin says the capsule is covered with resinous dots.



1986

Feb 1869 Published by J. A. Sowerby London



HYPERICUM hirsutum.

Hairy St. John's Wort.

POLYADELPHIA Polyandria.

GEN. CHAR. *Cal.* deeply 5-cleft, inferior. *Pet.* 5. *Filaments* numerous, united at the base into 3 or 5 sets. *Capf.* with many seeds.

SPEC. CHAR. Styles three. Calyx with glandular ferratures. Stem erect, round. Leaves ovate, downy.

SYN. *Hypericum hirsutum.* *Linn. Sp. Pl.* 1105. *Sm. Fl. Brit.* 804. *Huds.* 333. *Witb.* 666. *Hull.* 168. *Relb.* 295. *Sibth.* 234. *Abbot.* 166. *Curt. Lond. fasc.* 3. t. 49.

H. *Androsæmum dictum.* *Raii Syn.* 343.

FOUND chiefly on a calcareous soil, in dry shady places. In June and July, when it blossoms, few of our wild plants make a more elegant appearance; for though its flowers are smaller than those of *H. montanum*, t. 371, their profusion makes up for that deficiency; and the rich hues of the stem, herbage, and glandular calyx, particularly where the soil is pure chalk and the situation open, are well contrasted with the golden brilliancy of the petals.

Root perennial, branching. Stems upright, about 2 feet high, round, straight, leafy, more or less clothed with soft hairs, and panicled in the upper part. Leaves ovate, entire, ribbed, hairy, especially underneath. Flowers very numerous. Bractææ, calyx-leaves, and even the tips of the petals, fringed with blackish viscid pedunculated glands. The plant when rubbed partakes of the aromatic orange-like scent of the other species of *Hypericum*, and probably of their qualities.

“Balm of the warrior’s wound, Hypericon,”

as the elegant author of *Gondibert* calls it, is the more common *H. perforatum*, t. 295.



Apr 25. 1865. Published by J. J. Spence, London



HYPERICUM pulchrum.

Small upright St. John's Wort.

POLYADELPHIA Polyandria.

GEN. CHAR. *Cal.* deeply 5-cleft, inferior. *Pet.* 5. *Filaments* numerous, united at the base into 3 or 5 sets. *Caps.* with many seeds.

SPEC. CHAR. Styles three. Calyx with glandular serratures. Stem erect. Leaves clasping the stem, heart-shaped, smooth.

SYN. *Hypericum pulchrum.* Linn. *Sp. Pl.* 1106. Sm. *Fl. Brit.* 804. Huds. 332. With. 667. Hull. 168. Relh. 295. Sibth. 234. Abbot. 166. Curt. Lond. fasc. 1. t. 56. Dicks. *H. Sicc.* fasc. 16. 13. *H. pulchrum* Tragi. Raii *Syn.* 342.

THIS, one of the most elegant of its genus, grows frequently among bushes on commons and heaths, either on a clay or gravelly soil, flowering in July, when its tall straight slender paniced stems, bearing numerous yellow buds tipped with red, intermixed with already expanded flowers, are no less conspicuous than beautiful.

The root is woody and perennial. Stem round. Whole plant smooth. Leaves convex, firm and rigid, dotted, dark-green above with a glaucous tinge, paler beneath; they are sessile, heart-shaped and entire, generally deflexed; the lowermost soon become perfectly red. The calyx-leaves are elliptical, toothed with dark glands, and furrowed. Petals of a golden yellow, externally tipped with scarlet; their edge glandular. Antheræ red; which contributes to enliven the flowers. Capsule small, brown.

We know not that this plant has any thing but beauty to recommend it. We conclude with it the history of the British *Hyperica*, all of which, as far as hitherto known, have now appeared in the present work.



Oct. 1. 1803. Published by Jas. Sowerby, London.

2000

2000

HYPERICUM elodes.

*Marsh St. John's Wort.*POLYADELPHIA *Polyandria.*

GEN. CHAR. *Cal.* five-cleft. *Petals* five. *Filaments* numerous, united at the base into three or five sets. *Capsule* roundish.

SPEC. CHAR. *Styles* three. *Stem* round, creeping, villous as well as the leaves, which are roundish.

SYN. *Hypericum elodes.* *Linn. Sp. Pl.* 1106. *Huds. Fl. An.* 334. *Willd. Bot. Arr.* 815. *Rehb. Cant.* 289.

Ascyron supinum villosum palustre. *Raii Syn.* 344.

SPONGY bogs in several parts of England produce this pretty species, nor has it been observed in any other country, except the northern part of France (Dalibard *Parif.* 234). This specimen grew on Hayes common in Kent; Dr. Smith found the plant on Derlingham moor near Lynn, and Francis Borone in Cornwall.

The stem is round, and grows nearly prostrate among wet mosses and grass, throwing out long fibrous perennial roots from the first three or four joints; its substance is spongy; its upper part downy. Leaves opposite, covering the stem, almost orbicular, blunt, rarely emarginate, entire, with about seven nerves, clothed, especially on the back, with down composed of fine short jointed hairs. The panicle, terminal at first, becomes lateral by the protrusion of the stem beyond it, and is dichotomous, rarely producing more than from five to ten flowers, which appear in July and August, seldom expanding except in bright sunshine. Calyx divided about half way, fringed with red glands, as are likewise the bractæ. Petals with greenish ribs. Stamina in three sets, divided about half way down into from three to five filaments. Styles three. Nectary of three little yellow glands at the base of the germen.

This, as Linnæus observes, is very nearly related to his *H. tomentosum*, which however differs from *elodes* in having oblong leaves, the veins of which spring from the mid-rib, and not from the base, a much larger and more compound panicle, calyx and stamina more deeply divided, the former bearing black or purple glands.



